

SEQUENCE LISTING

<110> Wood, Marion
Shenk, Michael A.
McGrath, Annette
Glenn, Matthew

<120> Compositions and methods for the
modification of plant gene transcription.

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<160> 2368

<170> FastSEQ for Windows Version 3.0

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<213> Eucalyptus grandis

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<212> DNA
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<211> 182
<212> DNA
<213> Eucalyptus grandis

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<212> DNA
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<210> 16
<211> 397
<212> DNA
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aaaatttcca tgtgatgtgc aaaaaaaaaa aaaaaa 397

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 <212> DNA
 <213> Eucalyptus grandis

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 <210> 18
 <211> 60
 <212> DNA
 <213> Eucalyptus grandis

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 <210> 19
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 <212> DNA
 <213> Eucalyptus grandis

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 <212> DNA
 <213> Eucalyptus grandis

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<210> 25
 <211> 338
 <212> DNA
 <213> Eucalyptus grandis

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 aacgagacac tcctagatgt ccaggatcgg cgcacacg 338

<210> 26
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<400> 26
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 ggaacatg 188

<210> 28
 <211> 261
 <212> DNA
 <213> Eucalyptus grandis

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tccagaaccg	ccgggcccga	tggaagacca	agcacttgga	gaaggaatac	gaagatctgc	180
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<210> 31
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<210> 34

<211> 273

<212> DNA

<213> Eucalyptus grandis

<400> 34

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<210> 35

<211> 384

<212> DNA

<213> Eucalyptus grandis

<400> 35

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<210> 36

<211> 238

<212> DNA

<213> Eucalyptus grandis

<400> 36

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<210> 37

<211> 698

<212> DNA

<213> Eucalyptus grandis

<400> 37

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<210> 38

<211> 277

<212> DNA

<213> Eucalyptus grandis

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<210> 39

<211> 225

<212> DNA

<213> Eucalyptus grandis

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<210> 40

<211> 341

<212> DNA

<213> Eucalyptus grandis

<400> 40

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 <212> DNA
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<210> 42
 <211> 338
 <212> DNA
 <213> Eucalyptus grandis

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<210> 43
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<210> 44
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<212> DNA
<213> Eucalyptus grandis

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<212> DNA
<213> Eucalyptus grandis

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<210> 46
<211> 391
<212> DNA
<213> Eucalyptus grandis

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<210> 47
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<212> DNA

<213> Eucalyptus grandis

<400> 47

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<210> 48

<211> 648

<212> DNA

<213> Eucalyptus grandis

<400> 48

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<210> 49

<211> 559

<212> DNA

<213> Eucalyptus grandis

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<210> 50

<211> 486

<212> DNA

<213> Eucalyptus grandis

<400> 50
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 ctgctggagg agctttgcga agctggccgc gcaatttgta ccgagaaaat gacggatgat 180
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 gcatcattcg aatgtgtggc ggggcttagt aatgcagctc cttacgcaa cttggcttta 420
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<210> 51
 <211> 726
 <212> DNA
 <213> Eucalyptus grandis

<400> 51
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 accttcaact acctcgtcga gaacggattc acctattgct tagttgcagc tgaatctgct 480
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 ttgaaggaa acatgcaata ctgcgttgac catcccgaag aaatcagcaa gcttgcgaaa 660
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 gaccgg 726

<210> 52
 <211> 395
 <212> DNA
 <213> Eucalyptus grandis

<400> 52
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 gcgtcattgg aaaccctcag agatcacaca ttataaagtc atttagacat tttgttaacc 180
 attcttgcag gaggttcaatt acagagcatg tagaatcaca atgccttccc ctttttttgg 240
 gggaattaaa gaggcaccac ggatgcgatg tacacaaaaga aacaacatga gcgcagcagg 300
 aagcgatcac ctaatgtcgc agcaagcacg acatccagtt cacctcaatc agccactaat 360
 attgcccggg gatactgtcc atgagagcga attgc 395

<210> 53
 <211> 1700
 <212> DNA
 <213> Eucalyptus grandis

<400> 53
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 tactctgcta atatagatgc ggagcaaggc aaggtaacag tgctcgggtc cgtagatccg 300

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<210> 54
 <211> 944
 <212> DNA
 <213> Eucalyptus grandis

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tctcttctcg	taataattct	aatcctaaca	tgggtgtgta	tgcgagacaa	aaccagacca	180
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gagtcgcggc	agcgggtcgt	ggtggctctg	gcggacgggt	cgaaggaccc	ggagctggat	900
caattcatgg	aagcgtatta	cgacatgctg	gtgaagtacc	gggg		944

<210> 55
 <211> 915
 <212> DNA
 <213> Eucalyptus grandis

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ctgtacaatg	tggagattct	gctttcttgc	cactccaaat	ggaccacaag	tatcaacccc	180

agtcaaggac	tgcgtctgag	accaatccct	ttggagaacc	tactgcttcc	aagcatggtc	240
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caaagctaca	tcccttgcca	aaatctagca	gatcaaatca	catttcgtca	tcagatgctg	360
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gtgttgggtgc	cggttttatct	gaaatcattc	agagaaagtg	caagaatgta	gtgagcaagc	480
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ctccatcacc	aaaacaggca	tccgctggcc	aaagcaagag	acacagggca	ttaaattgagg	900
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<210> 56

<211> 498

<212> DNA

<213> Eucalyptus grandis

<400> 56

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tatggctctt	ccgtcgcttc	atgcgagcac	tactccgaag	tggaagcttc	ctctaactcg	120
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gtaggaggag	aggggcaggg	ggtgctaaaa	tatgatacat	ctctagctaa	tggtgcatct	300
ttgtactcca	tgcaagccat	cctagcggat	gagatgggtc	ttgggaagac	cattcaggcc	360
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tgcccggctt	ctctcttgga	gaattgggaa	aggggaactca	aaaggtgggtg	tccttcattt	480
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<210> 57

<211> 474

<212> DNA

<213> Eucalyptus grandis

<400> 57

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acgaccacgc	tttatgtttg	agttgcaatt	gtacattcaa	cattctggcg	tgttgcaatt	120
gcagctatcc	caaagattcg	gacaaacaca	tgctcgcaaa	acaagcggga	ctaaccagga	180
gccaggtgtc	taactgggtc	atcaacgctc	gggttcgcct	ctggaagccc	atggtcgaag	240
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gcagggccgc	caccaaattc	aacaaggacg	ctgctgggtt	gaagtccgca	tctcaagaag	360
acaatgcctt	tggaatgaac	agctccatca	aatccttcca	atcaagcccc	aacaaggccc	420
tcaatcaagc	cgccatttca	ccctccgaga	actccaactc	gacttctctc	actt	474

<210> 58

<211> 489

<212> DNA

<213> Eucalyptus grandis

<400> 58

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cccctcgggt	ttgtgggtgaa	ggtggaggac	cgcttgagtt	ccgggagcgg	tgaggagcgc	120
gtgggtggatg	aggacgggcc	gcagctcgtg	gacagcggcc	attcatattt	tcattgcaat	180
gactaccggg	gaagcttggg	ggcgcgtcaat	gggttgagct	cagaggacga	tggaagcgat	240
gatagccgag	gttactgctc	agagattttc	gccgctgctg	aagagccgca	tcaggaggga	300
ggcgtgccta	atgggggtgg	gggcgtggcc	ctagtttttag	gttttcgcct	tttgggtatgt	360

tctcgtaa	at	ggttcaagtc	aaatatgtgc	tc	atgcaatg	tt	tcacgaaggg	420
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aaaaaaaa								489

<210> 59
 <211> 456
 <212> DNA
 <213> Eucalyptus grandis

<400> 59							
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cagacacaaa	acgcaaccct	cgccaccact	gacacgagtt	gtgaatcggg	ggtgaccagt		180
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tccattgcag	aggaaacttt	aacagagttt	ctttcgaagg	ccactggaac	tgctgtggag		300
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cacggatgca	ctgggtgtggc	agcacgtgca	tgccgcttg	tgggtctaga	accttcaaga		420
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<210> 60
 <211> 455
 <212> DNA
 <213> Eucalyptus grandis

<400> 60									
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attgtctatc	gagcaagttc	tgtacttgga	gaagagcttt	gagactgata	acaagcttga				180
accagataaa	aaagtctcagc	ttgccaaaaga	actcggggtg	caacctcgtc	aagttgctat				240
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gaagctcaaa	gctgagggtta	ttcatttgac	acaccagcta	gagcaaagga	gcaacggaat				420
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<210> 61
 <211> 406
 <212> DNA
 <213> Eucalyptus grandis

<400> 61							
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tcaccgtact	ttttccgaaa	ccgggcacaa	tggagaataa	attcaggggt	acaatcattt		120
gagttcatat	gacatgccta	attacatgaa	ctgcgaaact	caaaagttca	atctttctcc		180
ttcccctgca	tcagcgccta	attctgaaaa	aaattgagcg	tcagcaagt	tttagggatg		240
gattttctgt	tttgctagag	gggggattgg	ctatgggaat	tgaggaggcc	acgaagaggc		300
aatcgatttt	cagctatcct	gaggatcttt	acaacgagga	atattatgat	gaccaggcgc		360
cggaaaagaa	gcgccgcctc	actcctgagc	agggtgcatct	gttgga			406

<210> 62
 <211> 530
 <212> DNA
 <213> Eucalyptus grandis

<400> 62							
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acggggggcg	agtgtgttac	gtgaagggtga	tgacggacga	gcagctggag	accctccgga	480
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<210> 63
 <211> 452
 <212> DNA
 <213> Eucalyptus grandis

<400> 63						
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<210> 64
 <211> 354
 <212> DNA
 <213> Eucalyptus grandis

<400> 64						
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gcaaaatacc	attaacggat	cttgcagcat	ggaaagcatt	ttagagaggt	acgagagata	180
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<210> 65
 <211> 1239
 <212> DNA
 <213> Eucalyptus grandis

<400> 65						
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<210> 66
 <211> 371
 <212> DNA
 <213> Eucalyptus grandis

<400> 66						
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<210> 67
 <211> 387
 <212> DNA
 <213> Eucalyptus grandis

<400> 67						
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<210> 68
 <211> 479
 <212> DNA
 <213> Eucalyptus grandis

<400> 68						
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tcggccgccc	cctcgccgcc	gtcccggccc	acccccgccc	cgtgcccctc	atcaacccat	420
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<210> 69
 <211> 684
 <212> DNA
 <213> Eucalyptus grandis

<400> 69						
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<210> 70
 <211> 356
 <212> DNA
 <213> Eucalyptus grandis

<400> 70						
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tgtccaggcc	gtccaattca	gtgcgaaggt	ggaggatagg	ctgagcacaa	ggagcggggg	300
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<210> 71
 <211> 725
 <212> DNA
 <213> Eucalyptus grandis

<400> 71						
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<210> 72
 <211> 523
 <212> DNA
 <213> Eucalyptus grandis

<400> 72						
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<210> 73
 <211> 646
 <212> DNA
 <213> Eucalyptus grandis

<400> 73						
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<210> 74
 <211> 471
 <212> DNA
 <213> Eucalyptus grandis

<400> 74						
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<210> 75
 <211> 766
 <212> DNA
 <213> Eucalyptus grandis

<400> 75						
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<210> 76

<211> 443
 <212> DNA
 <213> Eucalyptus grandis

<400> 76
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 gctcatcctc actaccaccg ccttctctca gcttatgtca attgtcagaa ggtgggagct 180
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<210> 77
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 <212> DNA
 <213> Eucalyptus grandis

<400> 77
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<210> 78
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 <212> DNA
 <213> Eucalyptus grandis

<400> 78
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 aaagaatgtg gtcttccaga aaattctttc gtctcaattc cacaaaaaat gacagaaaat 240
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<210> 79
 <211> 436
 <212> DNA
 <213> Eucalyptus grandis

<400> 79
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<210> 80
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 80
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<210> 81
 <211> 478
 <212> DNA
 <213> Eucalyptus grandis

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<210> 82
 <211> 493
 <212> DNA
 <213> Eucalyptus grandis

<400> 82
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<210> 83

<211> 764
 <212> DNA
 <213> Eucalyptus grandis

<400> 83

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<210> 84
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 <212> DNA
 <213> Eucalyptus grandis

<400> 84

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<210> 85
 <211> 427
 <212> DNA
 <213> Eucalyptus grandis

<400> 85

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<210> 86
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 <212> DNA
 <213> Eucalyptus grandis

<400> 86

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<210> 87
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 <212> DNA
 <213> Eucalyptus grandis

<400> 87						
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<210> 88
 <211> 468
 <212> DNA
 <213> Eucalyptus grandis

<400> 88						
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 <211> 441
 <212> DNA
 <213> Eucalyptus grandis

<400> 89						
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ttttgctgat	tcacagacca	aagtggagag	catggtttat	ccagatggca	gtttgagatc	360
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<210> 90
 <211> 744
 <212> DNA
 <213> Eucalyptus grandis

<400> 90						
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cgctggaggt	gggatctggg	ggtgctcgct	ctacttgtga	agctgatgct	agcacctaca	180
acctgcgatc	tgtcctcacc	atcgcattcc	aattcgtgtt	tgagaaccat	ttacgggaca	240

ctgttgccat	catggctcgt	caatatgtgc	gtagtggtgt	gggatctgtc	cagaggggtg	300
ccatggcaat	tgcaccttcc	aggctaggtg	gccatctggg	gccaaaatct	ctctctgggt	360
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tgctggaaaa	ggttcttgat	gaagggtggca	ggaaagtctt	ttcttcggag	ttcccgaaga	660
tcatgcagca	gggtatcgcc	tatctgccag	ccggagtatg	catttctagc	atgggaaggg	720
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<210> 91
 <211> 509
 <212> DNA
 <213> Eucalyptus grandis

<400> 91						
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gcgccgacga	agggcccttt	ttcgatgacg	acaaaatcac	acttatacag	tcatcacttt	420
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gagagagaga	gagagagaca	tatatagac				509

<210> 92
 <211> 363
 <212> DNA
 <213> Eucalyptus grandis

<400> 92						
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agtcaacaag	aagttatgcc	tgcacctctt	cttcaggtaa	tgacagatga	ggagaagcat	300
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ttg						363

<210> 93
 <211> 110
 <212> DNA
 <213> Eucalyptus grandis

<400> 93						
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<210> 94
 <211> 440
 <212> DNA
 <213> Eucalyptus grandis

<400> 94						
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ttgattggtg	gagtcgacac	tacaaatggc	cttaccatc	agaatcacag	aaactagctc	180
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agaggcactg	gaagccatcg	gaggacatgc	aattcgtggg	tatggatgcc	actcaccctc	300
attactacat	ggacaacatg	ctcggcaatc	cctttcccat	ggacatctct	ccgaccttgc	360
tttgaagtct	atgggtgata	ttgctaatat	tattcgaccc	tagtgtcatt	atgagctcta	420
aatgtgctct	ttccgagtgc					440

<210> 95
 <211> 413
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 95						
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cccccgacac	tatatacttc	aaaattgcaa	caaggctgga	agctcatttc	cagagcaagg	240
tacaatcgaa	tctccagtct	ggtgccggaa	aaattcaaca	gtagagcatt	cggtagactg	300
gaggccctga	ccttacttct	ctctatatga	atatgtggag	ccttggatac	ttactctgat	360
ccatgattgc	gctggggaat	taactagctt	cgattgacca	tgtaactgaa	gac	413

<210> 96
 <211> 706
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 96						
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agagagagcc	atcaccaaaa	gcccgaagat	catggggaga	ggaaagatcg	agatcaagag	180
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cagaggacgc	gtctacgagt	actccaacaa	cagcataagg	tcaactatag	agaggtaaaa	360
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cgagtacctg	cagaaaaaag	agattgagct	cgaaaatgaa	agtgtgttcc	ttccgcacaaa	660
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<210> 97
 <211> 396
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 97						
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gtgatgctga	ggttgctgtc	ataatcttct	cgaatactgg	caagctttac	gagttctcca	180
gttctggaat	gaaacagata	ctatcaagat	acaacagggtg	tcaagattct	ccagagtcca	240
ctgttgtaga	gtacaagcca	gagtctacga	aagaagatga	taagggtggtg	gacaccctaa	300
aagatgaaat	cgcagagctg	cagatgagac	aactaaggct	actgggcaag	gacttgaatg	360
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<210> 98
 <211> 379
 <212> DNA

<213> Eucalyptus grandis

<400> 98

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atcaaagaaa	atgagaaggt	aatgagagag	agtggacaat	gggagcagca	aaccccagca	180
ccgaccacat	cctccttcat	gctacaaccc	actttgcctc	ttccttccct	caccattggc	240
aacacgttcc	agacaccgca	tgtacttgga	ggagcagaac	aagaggagag	atctcaagcc	300
cgaccagcca	acacgctcat	gccgccttgg	atgatacgcc	gttcaaata	atagagagat	360
agagaccaac	aacattctc					379

<210> 99

<211> 421

<212> DNA

<213> Eucalyptus grandis

<400> 99

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ctcttcttta	gacggagtga	agacggtgga	gataaacagg	aagcagcaga	aggtgacggt	180
gaacgggtac	gtcgaccaga	ataaggtgct	gaagagggcc	aagtcgacgg	ggaagaaggc	240
ggagatatgg	ccctacatac	cctacagtgt	ggtggctcac	cagccgtaca	tcgcccagtc	300
ctacgacaag	aaggcacctc	ccggccacgt	gaggaaggtc	gagccaaccg	ccaccagtgc	360
catcgtgacc	cggcacgagg	acccttacat	gaccctcttc	agcgacgaca	acccaatgc	420
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<210> 100

<211> 460

<212> DNA

<213> Eucalyptus grandis

<400> 100

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gatctggatc	ttggtgctgc	cctaaggaga	tggcgattta	ttggtttttc	ttcttttttg	360
ggtttcagtt	tcttgactct	ttttgcgatc	tttccgttca	ccatgaaaaa	aagctttcag	420
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<210> 101

<211> 423

<212> DNA

<213> Eucalyptus grandis

<400> 101

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ggaggtaaat	cgaatgattg	ctaggagtga	agaagaggtc	gagctatttg	atcagatgga	180
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ggccagtaca	aaggagggtca	atgctgctat	tgccactcta	tcaaagaaac	catcgaaaaa	300
cactttgttt	gctagcacia	tagtggaacc	taatgaaccg	gtatcggaat	cagtgagaaa	360
gagggggcgg	cccaagagta	aaaagcatcc	taattacaag	gaactagatg	atgacaatga	420
aga						423

<210> 102

<211> 381
<212> DNA
<213> Eucalyptus grandis

<400> 102
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tctcgaattg gttcataaat gccagggctc ggttggtgaa acccatggtg gaggagatgt 360
accagcaaga gtccaaagaa g 381

<210> 103
<211> 473
<212> DNA
<213> Eucalyptus grandis

<400> 103
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agatgggtca ttgaagcaga tcagatcacg aagagtatgt aaattatatt cacgaattct 420
atctaagtca catcctgagt tattgtgaat acaagttact gtgtcaatcg ctg 473

<210> 104
<211> 634
<212> DNA
<213> Eucalyptus grandis

<400> 104
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ctgaagatga caagggcga cttgtggagg agacaggatt gcagctgaag caaataaata 180
actggttcat caaccaacgg aagcgaaact ggcacaacaa ttcccaatcg gtcacctct 240
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tggtgttttt ggcagtaaaa aaaaaaaaaa aaaa 634

<210> 105
<211> 483
<212> DNA
<213> Eucalyptus grandis

<400> 105
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ccgcactgcc atccggtttc tcgatcctgc ccgatgggat cgagtcgagg cctctagtca 120
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gagaaaaatt	agcagttcaa	aagcaatggc	tttttttcat	ttgttctttg	gttggattgg	420
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aga						483

<210> 106
 <211> 404
 <212> DNA
 <213> Eucalyptus grandis

<400> 106						
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aaaggaaatct	tcttggggaa	gaattaggcc	ctctgagcag	caaagaactg	gagtctctgg	360
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<210> 107
 <211> 527
 <212> DNA
 <213> Eucalyptus grandis

<400> 107						
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<210> 108
 <211> 482
 <212> DNA
 <213> Eucalyptus grandis

<400> 108						
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ct						482

<210> 109
 <211> 343
 <212> DNA
 <213> Eucalyptus grandis

<400> 109

<400> 113
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<210> 114
 <211> 534
 <212> DNA
 <213> Eucalyptus grandis

<400> 114
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 agttggaacc tgtgttgatt tccttttctt taggttttgt ccttcaatgg gatcgtctgt 480
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<210> 115
 <211> 450
 <212> DNA
 <213> Eucalyptus grandis

<400> 115
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<210> 116
 <211> 501
 <212> DNA
 <213> Eucalyptus grandis

<400> 116
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 actgcaacag atagaacagc agctagaacg gagtggtatc agcattcgtg ctagaaagac 180
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 gaatgcaatc ttaactgaga agtgtggaat caagcccca caaagagcaa atgagtgcag 300
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 cggaccacca gagaccagat cgaggcgctt gccgtttcag aattaaaaat atagccctag 420
 cctctcaaag tttcaaatg tcacaaggca gacgggcaga aaacaaccac cgaccatggc 480
 cgaagaacac caccaccac t 501

<210> 117
 <211> 372

<212> DNA
<213> Eucalyptus grandis

<400> 117

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gggtgggtgt	tcaacacccc	cgtcgacgcg	gtcgggttag	ggcttcacga	ttaccaccag	180
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cactcgccgc	aggagtctgc	ggccgacgtg	aggctgacct	tcaacaacgc	attgacgtat	300
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<210> 118
<211> 378
<212> DNA
<213> Eucalyptus grandis

<400> 118

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cacaagacca	cttcttcgtc	ctccgacggc	acgcccctgc	acgtttcctg	cctctcgggc	180
cacgcgtcct	tcaccaaaaca	cctcctcacc	cacaaccccg	agctcgccaa	ggaggccgac	240
tcccgcggct	ccctgcccct	ccacgtggcg	tgcgcgaaag	gcgacgtgga	gatcgtcagg	300
gccctcgtgg	ccgtcgaccc	ggccgggtgt	ctccggtatg	atcgcgaggg	gaggacgcct	360
ctgcacttgg	ccgccatc					378

<210> 119
<211> 414
<212> DNA
<213> Eucalyptus grandis

<400> 119

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cgacatgtcg	aggaagaagc	tccggctgtc	gaaggaccag	tccgccgtcc	tcgaggagag	120
cttcaaagag	cacaacaccc	tcaatcctaa	gcaaaagctg	gacttgccga	agcagctggg	180
gctgcggccc	agacaagtgg	aggtctgggt	ccagaacagg	cgagccagga	cgaagctgaa	240
gcagacggag	gtggattgcg	agtacctgaa	gcggtgctgc	gagagcctga	cggaggagaa	300
ccggcggtcg	cagaaggagg	tgcaggagct	gcggcgctc	aagctctccc	cgcagttcta	360
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<210> 120
<211> 313
<212> DNA
<213> Eucalyptus grandis

<400> 120

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ggagccgcag	tgccgcccgg	gttcccagg	gcgcactggg	tcggagtcag	gttccgccag	180
tcggatcacc	atccaatcgg	atcggggcaag	ggctcaccga	tattggaggg	ttcacagccc	240
atgaagaaga	tcaggaaaagg	gccgaggctc	cggagctccc	agtatagagg	ggtcactttt	300
tacaggcgaa	ctg					313

<210> 121
<211> 415
<212> DNA
<213> Eucalyptus grandis

<400> 121
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 cttcaaagag cacaacaccc tcaatcctaa gcaaaagctg gcactggcga agcagctggg 180
 gctgcggccc agacaagtgg aggtctggtt ccagaacagg cgagccagga cgaagctgaa 240
 gcagacggag gtggattgag agtacctgaa gcggtgctgc gagagcctga cggaggagaa 300
 ccggcggtg cagaaggagg tgcaggagct gcgggcgctc aagctctccc cgcaattcta 360
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<210> 122
 <211> 385
 <212> DNA
 <213> Eucalyptus grandis

<400> 122
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 cctccacgag gcctccgtgc tcggccacgc cgacctcgtc cgggagctgc tgcgccgcgc 180
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 ggtgggacgg atggctcggg ccgtc 385

<210> 123
 <211> 282
 <212> DNA
 <213> Eucalyptus grandis

<400> 123
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 atatccatcg gagacagaaa aggtggcatt ggctgaatcc actggtttag accagaaaca 180
 gataaacaat tggttcataa atcatgttat agagtgttgg gtaaaagtcca tggcaaccct 240
 aatgcaagaa atatttttga tgactaaggt cattcttagg tc 282

<210> 124
 <211> 383
 <212> DNA
 <213> Eucalyptus grandis

<400> 124
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 aactcggggg gacgaggcag ctgttcccgg tgagggaggt ggatgcggat atggagtgg 120
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 aaaaggaagg tccgaggctg gcgatgccgc agcagcggag gaagagcagg aggggaccga 240
 ggtcaaggag ctcgcagtat agaggggtta ctttttatag gaggactgga agatgggagt 300
 cgacatatg ggactgtgga aaacaagtgt atttggttgg attcgacact gcacatgctg 360
 cagctagacc tatgatcgag ctc 383

<210> 125
 <211> 350
 <212> DNA
 <213> Eucalyptus grandis

<400> 125
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<211> 385
<212> DNA
<213> Eucalyptus grandis

<400> 129
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gggtgatgag ctgaaaaata aggtttcaga gaaggctaag ctatctgtat gtatgtatca 180
tgggaccacc aggaccaaag atccatatga attagctaatt tatgatgttg ttctgacaac 240
atattctatc gtaagcatgg aggtaccgaa acccgctggg tttaaagatg agaaggatag 300
tctgcaagat gatgatgatg cgtttttttg taggaagaga aagcactctg ctaaactctga 360
gaaaagacgc ttgaagaaag aaatg 385

<210> 130
<211> 345
<212> DNA
<213> Eucalyptus grandis

<400> 130
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agttccagcg ttcagctttg catggctcga gctggttagt cacaggagtt tcatgccaaa 180
gattctctca gggaaactctc agaaagggtg gccttacttc cagcgctgc tggttgactt 240
gtttcagtac atggaaccat tcttgaggaa tgctgaactt ggtttgccgg ttcattttct 300
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<210> 131
<211> 766
<212> DNA
<213> Eucalyptus grandis

<400> 131
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cccaaaaccc catcggaccc aaaaacccta acgaagatga atagggagag gcttatgaag 120
atggcggggt ctgtccgcac tggtggaag ggtaccatga gaagaaagaa gaaggctgtt 180
cataagacca ccacgacaga tgataaaagg cttcaaagca ccctgaagag gattgggggtg 240
aatgccatcc ccgcaattga agaagtcaac atttttaagg atgatgtagt tatccagttt 300
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cagggtgactg agggcactaa ggtgactgag gcaactccgg cctcctagag agagggattg 660
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<210> 132
<211> 162
<212> DNA
<213> Eucalyptus grandis

<400> 132
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catcctgcac agtatagaac aagactgtgc aaggatgaga ctggatgtgc tcgcaaagtt 120
tgtttctttg ctcaaacgcc cgaagaatta aggcctgtct at 162

<210> 133

<211> 518
<212> DNA
<213> Eucalyptus grandis

<400> 133
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aagccttaca ataaatctac tattagctga gtattgggtg tcgaataatt tgcacgaagc 120
cacgaactat tggcaatcga tctcatggct tcctcgagcg gaacgtcttc cgggtcaacc 180
ttgatccaga actcgggagc agaggagagt ctgcaggcct tgatggatca gaggaagagg 240
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gtccagatga acgagctcac caacaggctg gagtctttga aggatatact cggtatcctg 480
gatgccggag atggtggcag accaggaaat ggtggcgg 518

<210> 134
<211> 413
<212> DNA
<213> Eucalyptus grandis

<400> 134
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taaagatttt ctcaggaggg atttcatgga ggagacaagg aggcggcaaa gcagttgaag 180
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<210> 135
<211> 278
<212> DNA
<213> Eucalyptus grandis

<400> 135
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ggtcgcctct ttccagagta ccgtcccagt gcaagcccaa catatgtccc ttctcttaac 120
attgtatcca atgaaatccc ttcaagccat ttatggcttt ccttcttca aaaataaatc 180
ttttcaacca ttgtactcc cacacgtatc cgactcacag taaggttgca aaaccacgtc 240
tatgttgtcc aaccttctcc aaaagagtgg cagagtac 278

<210> 136
<211> 237
<212> DNA
<213> Eucalyptus grandis

<400> 136
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gacggaagga tcatcctgca gcaagggttaa tgggtggctct tcaagaattg aacttggagt 120
tgacgcatgc tagtgtttct gtggtgaacg agctcatgat ccagcaagcc acagttaaga 180
tggggagtca gttgtacact caggagcagc tcaaggcagc tctattggcc gtaatct 237

<210> 137
<211> 371
<212> DNA
<213> Eucalyptus grandis

<400> 137
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 acggggcgaa gacgctgtgc aacgcgtgcg gggctccggtt caagtcgggc cggctgtacc 180
 cggagtaccg gcccgcgtgt agccccacgt tttctagcga gctgcactcg aaccaccacc 240
 gcaaggtgct ggagatgagg cgcaagaagg agtcaatgac gacgacggca ctgggtcagc 300
 ccgagcccgg tcggggcccgt gcccagcttt tgagggcaag ggtgggttct tcctggcgcc 360
 ctcgggaaat a 371

<210> 138
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<400> 138
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 aagtctcacc cgaacctcga tgaagatcat cgtcaacctt tcgggctcct ttaggccgcg 240
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 aattgcagat gcagtgttg ggtgatcgag agtgaaacta gtgttgggta tgacttcttg 840
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 <211> 509
 <212> DNA
 <213> Eucalyptus grandis

<400> 139
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 gtcctcgggt cgcgacctt ttggtgattc ctctgctgcc cacgaagggt cctcgggtcg 240
 aatatccgca gattctgggt tatcgttgtc tttcggatcg ggtttggtat attgggcgca 300
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 gaatttcaag agcagctccg agtctcatt 509

<210> 140
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 <212> DNA
 <213> Eucalyptus grandis

<400> 140
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 ttaaggatga tgtagttatc cagtttttga atcccaaagt tcaagcgtct attgctgcaa 180

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tctggt						426

<210> 141
 <211> 310
 <212> DNA
 <213> Eucalyptus grandis

<400> 141						
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<210> 142
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<400> 142						
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<210> 143
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 <212> DNA
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<400> 143						
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cggaaggtc						369

<210> 144
 <211> 768
 <212> DNA
 <213> Eucalyptus grandis

<400> 144

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<210> 145

<211> 546

<212> DNA

<213> Eucalyptus grandis

<400> 145

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gccgccc						546

<210> 146

<211> 640

<212> DNA

<213> Eucalyptus grandis

<400> 146

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<210> 147

<211> 236

<212> DNA

<213> Eucalyptus grandis

<400> 147

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ctcgatccca	agttcaagga	ggccaatcag	aaaggaccct	tgtgggacga	agtctccagg	120

ataatgtctg	aggaacatgg	gtacaataga	agcggcaaga	agtgcagaga	gaagtttgaa	180
aacctgtaca	agtactacaa	gacaactaag	gaaggcaaaag	ctggaaggca	ggatgg	236

<210> 148
 <211> 520
 <212> DNA
 <213> Eucalyptus grandis

<400> 148						
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ctcaaataaa	cttccgaaac	ttggccgatg	tgccagcagc	cgaaagaagc	accggagggc	180
aaccaggaat	tcccctatta	tctcgacaat	cctcagtata	ttccttgact	ttcaatgagt	240
ttcagaacac	atggagtggg	ctttctaagg	atattggatc	catcaacatg	gatgagttcc	300
tgaagaacat	atggacagct	gaggagagcc	aactacagct	acaagacatg	gcgccttctg	360
gtaatggagg	ggaaggaggt	ggtcaagtag	ggaatttgct	gagacagggg	tcattgactc	420
tgtcgcggac	tattagtcaa	aaaacagttg	atgaagtgtg	gagagaatta	ttcaaagaga	480
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<210> 149
 <211> 148
 <212> DNA
 <213> Eucalyptus grandis

<400> 149						
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tcgtccggcc	tactgtgcaa	cgacgcggtc	atctgggtca	ccttccacag	cgctacgac	120
ttcgggtacc	tggtcaagat	cctgaccc				148

<210> 150
 <211> 443
 <212> DNA
 <213> Eucalyptus grandis

<400> 150						
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aacactagcc	ccacctcact	cattatccgc	ttcgctccta	ctcaactgct	atcgcgctat	120
cccagcgcag	acgtcctccc	atgaacttct	ccgacaagga	agtgcagctc	gcgtccgacc	180
acccgaagaa	gcccgcggg	agaaagaagt	tccgggagac	ccgccacccc	gtgtaccgcg	240
gggtgctgtc	gcgcgactcg	ggcaagtggg	tctgcgaggt	tcgcgagccc	aaaaagaagt	300
cgaggatctg	gctcggcacc	ttccctactg	tgagatggc	agcgagggcg	catgacgtgg	360
cagcgctcgc	gctgagaggc	cagtctgcct	gcctcaactt	cgcgactctc	gcgtggcggc	420
tgcccaagcc	ggcatcgacg	gat				443

<210> 151
 <211> 341
 <212> DNA
 <213> Eucalyptus grandis

<400> 151						
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acttctagcc	aggttcctga	gattccacca	gctttggggg	cctcagcaaa	tgatccctca	120
tctgccgtat	ctgaactaaa	ggctccgtca	cagggtagct	ctaagggtcac	tactaaccag	180
tttccagata	tggttatgct	cgaggagca	caggagtctg	aagcagtctc	cgttaatcag	240
gcagataacc	ttatgactgg	gatctctcaa	acacaagaca	tggtgctgga	ggatattgct	300
aatatatcca	gagatgacta	catgggagca	gatctgcata	a		341

<210> 152
 <211> 603
 <212> DNA
 <213> Eucalyptus grandis

<400> 152
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 ctcttctaga cggcgtagtg gaatttggca ccacggaaaag ggttcaagag gacatttcac 180
 tcgtcaatca tgtcaaaaacc ttcttcggtg accaccaccc ccctcaccca ccgaaacccg 240
 ccctttccga aactcgcacc tccaaccccc cgcgccacct gtccggccac caccgcttcc 300
 actccccgcc cgtccccctc tacgccccgg ccgatccacc cgctgcagcc aaccaagggg 360
 atgaggagga agaggacgac gacgacgacg aggaggaggg agagtccgac tccgaggccg 420
 agaccggccg gcagggggcg gcggcggcag cgcagaaccc tcacggcgca gggcccgcga 480
 acaacgccga gccacgtgag ttcgagatgt ctgaggacat ccggctcggc tcgccagacg 540
 acgggtcaaa caacctggac tcggacttcc ccatgctgac cataaactcg acggccgcgg 600
 atc 603

<210> 153
 <211> 984
 <212> DNA
 <213> Eucalyptus grandis

<400> 153
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 acaccgtctt tggtagggcg gatgaggaca attatgctct cggcttgga cgggtgacgg 180
 acatggagat gttctttctg gcgtccatgt acttcttgtt tccctcggga gaagggggtc 240
 caggcaaatg ttttgccctg gagaagcatg tatggctgac agatgcactc aagtcgtctt 300
 ctgattattg cgttcgggtc tttcttgcaa agtctgcagg gattcggaca atagttttg 360
 ttccgactga cgttgggggt gtagagttgg gtccggtag atctgtccc gaaagctcgg 420
 agctgggtga gaccataaga ttgtctttct cgacgaattc atttatgtcg gttaagccaa 480
 tagctgcctt acccatgacg aatgaaaaga aggacgaaaa cgcacccttc tctaatttgg 540
 cgttggcagg taaggggtgag gcaatctcca agatatttgg taaggagtta accacagtta 600
 acagtccctg ccattatagg gagaaacttg ccgttagaaa gatggactcc aggcaatcgt 660
 gggaaacctc ccataacgga agtaaaactc cattttcaac tcctagaaat ggcacccaag 720
 acacgagttg ggctcatcat gctcatggcg taaagcagtt gagtccgtg gaattttatg 780
 gctctcaaac ctcagccagt aaattagagg agcggatgaa cagcggtagg aatgattttg 840
 gattgaaccg ctacccaaca ccaagcagg tgcaaatgca aatcgacttt acagggtgca 900
 cttcaaggcc ttctgtgata acccgacct tcaactgccga ctctgagcat tctgatgttg 960
 aagcttcatg caagggaagag cagg 984

<210> 154
 <211> 1144
 <212> DNA
 <213> Eucalyptus grandis

<400> 154
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 cgtccagatc ccccccgtgt gggacccgct cgacgaccgg gccaccggcg gctgcggcgg 180
 gccgtactca ccgtactccc cgtactcccc gtactccggc ggccggcaatg ccggcggggc 240
 cgcggggagg ggggagtgct gcaacgacct gacggcggtt cggcggttcc tgccgtcgaa 300
 ccaccaccag gacgaggagg acgaggagga cggcgggcg cccggggagg acggcggtgct 360
 gggctgcgac gaggttccgga tgtacgagtt caaggtgagg aagtgcgcgc gcggggaggtc 420
 gcacgactgg acagagtgcc cgtacgcgca ccccggcgag aaggcgcgac gcagggaccc 480
 gcgcccgttc ttctactccg gcaactgcat tcctgatttc cgcaaaggcg cgtgcaagaa 540

gggtgacacg	tgcgagttcg	ctcacggcgt	gttcgagtg	tggtccacc	cggagcgata	600
ccggacgcag	gcgtgcaagg	acgggcaaa	ctgccgccgc	cgcgtctgct	tcttcgcccc	660
ctcccccgac	cagctccggg	tcctccccgc	ccaccagcag	cagcagcagc	agcagcagca	720
gcagcagcac	agtcccaaga	gcgccaccga	ctccgagttc	gggtccccgg	tccgccccctc	780
cgctgccgcg	gcggcgccct	tcgactccta	cttcaccaag	ccgtgggtcg	cctccttcat	840
atcctcgccc	acctcgatcc	tgaccacctc	gtcgcccccg	atctcgcccc	cgaccaactc	900
gcccccgatg	tccccgaacc	aacgcggcgg	ctgctgcggg	tcgcccggat	cggtgagcga	960
gctggtggcc	tgcatgagga	atatgcagat	cgccaagatg	aagatgagcc	cccgcgggca	1020
gatggggggg	tctctcttcg	ggtccccgct	ccgacccggg	tgccaccttg	cggcgccgggt	1080
gactcccagg	gccgagttct	caccgcggta	cgggcaactc	ggcgggtggag	gtggaggcgg	1140
gctc						1144

<210> 155

<211> 238

<212> DNA

<213> Eucalyptus grandis

<400> 155

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cggcgagcag	agcccgagc	tcggggcgcg	tgaggagca	ggataggtac	ctgccgatcg	120
cgaacatcag	ccgcatcatg	aagaaggcgc	tgccggccaa	tggaagatc	gccaaggacg	180
ccaaggacac	tgtccaggag	tgcgctctcc	agtttatcag	cttcataacc	agcgaggc	238

<210> 156

<211> 950

<212> DNA

<213> Eucalyptus grandis

<400> 156

gacgcttccc	tcctccccca	tcccggccat	ggcgaccccc	gacgaacgcc	cctcctcctc	60
ctcctccgcc	gcctccgccg	tcgccatccg	ccaggtctgg	gcctggaacc	tcgacgccga	120
gttcggcctc	atccgcgacc	tcacgcagcc	ctaccccttc	gtctccatgg	acaccgagtt	180
ccccggcctc	gtcttccgcc	gccccgccgg	cgccggcgcc	ggcgccccgc	cctccccctc	240
cgaccactac	cgctcctca	agtccaaagt	cgacgccctc	tcctcatcc	aggtcggcct	300
cacctctctc	gacgccccgc	gcggcctccc	cgggttcatc	tggaagtcca	acttccggga	360
gttcgacgcc	gccccgcgac	cccacgcgcc	cgactccatc	gagctcctcc	gccgccaggg	420
cgtcgacttc	gaccgcaacc	gcgccgaggg	gatcgactcc	gcccgccttc	ccgagctggg	480
gatgtcgtcc	ggcctcgtct	gcaacgacgc	cgtcagctgg	gtcacgttcc	acagcgctta	540
cgacttcggg	tacctgggtc	aggccctcac	ccgcgcgag	ctccccggcg	acctcccgga	600
gttctctgcc	gtcgtgcggg	tggtctctcg	ggaccgggtg	tacgacgtga	agcacctcat	660
gcggttctgc	cacagcctgc	acggcgggct	ggaccgggtc	gccgcggccc	tggaagtggg	720
ccgggcgggtc	ggcaagtgcc	accaggccgg	ttccgacagc	ttgctgacgt	ggcaagcggt	780
caggaagatt	agggacgtct	acttcgcca	cgacgacggg	ccggagaagc	acgccggcgt	840
gttgtagcgg	ctagaggtct	attaggtatc	atccccaaaa	ttcaattcat	tcttttgtac	900
cgtaccaa	ttgtgggtac	atattgtgaa	tattgttcgg	tatcttattc		950

<210> 157

<211> 272

<212> DNA

<213> Eucalyptus grandis

<400> 157

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tcttctaccc	agaggaaa	acctacttct	tcctttatca	cccatgggtt	cttaaacctc	120
gtgacagtgc	aatttaaa	ttagagcaaa	acataaaaa	agaagagagc	tgttcaaatg	180
gctactggcg	tagaaggcaa	tgaagggtgc	ccagcaaa	tgagaaagca	gcttgctgtg	240
gctgtgagga	gtatccaatg	gagctacgca	at			272

<210> 158
 <211> 863
 <212> DNA
 <213> Eucalyptus grandis

<400> 158
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 cgatcccagc tcctgcagcc tcgactttgc tgaagcgctcgc tcctcctcgt cgccgctgtc 180
 cgatggcagg agtgctatgg tgcccgggaa cttttctgat gaggaggtgc tcctggcgctc 240
 gcaccagccg aagaagcgcg ccgggcggaa gaagttccag gagacgcgcc acccgtgta 300
 ccgcgggggtg cggcgggcga gctcgggcaa gtgggtctgc gagggtccgcg agcccaacaa 360
 gaagtcgagg atctggctgg gcaccttccc caccgcggag atggctgcga gggcgacga 420
 cgtggcgggc ctcgcgctga ggggcccgtc cgctgcctc aacttcgcgg actccgcgtg 480
 gcggctgccc gcgcggcggt cggcggaagc aaaggacata cagcaggcgg cggcccaggc 540
 tgccgaggcg ttccggccgg cggagtccga ggctgaggac gtgatgtcgg ggtacgagaa 600
 gaagtcgcct tcggaggagg gaatgctgta cgacgcagag gacgtcttcg ggatgccggg 660
 gttactcacg aatatggcgg aggggatgct cttgcctcca ccacaatgcg gcggagatgg 720
 gtacggcgga gaggacgacg ggaatctgga tgcatactgt tcgttatgga actattccat 780
 gtagtcattt ctcaatttca gttgtacttt ttgtggttag ggacgactgg gatgccgact 840
 aaaatatttt tgaatggagt gcg 863

<210> 159
 <211> 936
 <212> DNA
 <213> Eucalyptus grandis

<400> 159
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 aggagagact ttgttgttgt tgttgctgct gttgtgtggt tggagtgtgg aggaaggagg 120
 aaggaaggga ggagaagggt tcaagagggg agacatgttc agcttgatcc caacagttcc 180
 attctttgct tcttccctcc tgaccagatc cttcaccagc tgatatctga atgagctgag 240
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 ttcgatgcct catgtcgggg tgacttacct accatgggtg agcctgaatg aacagcaact 420
 tccgcaatct ttacccaaaa atagtggctt gaaagcggaa tctccacca tgctccatca 480
 tcaagcaaaag catttaggtc ttcaactaca agaacaggaa tcgtcttcaa ctcaatcggc 540
 tggcaattct tgccatgaag tgagcgtcgt ggggtggggc aactctcaag atcaaaagcat 600
 ttcattctgaa tctggtcaag atgaaagtgt tggcaggagc tttgagggcc agacaaaagcc 660
 aattttcatg ttcaacaatc cggagattgt cttcaattct tcaactagctg atcaaaatca 720
 acctctgatt cgtgttccat atccaccagt cgatccttat tacggtgggc ttctgactgc 780
 atacagacca caggctatta ttcaatccca ggtaggatct caaatgttcg ggatggcacc 840
 tggacgtgtt ccattgccac ttaaccttgc agaccatgga ccaatctacg tcaatgcaaa 900
 acaatattca cggaattctt cggaggaggc agtcac 936

<210> 160
 <211> 281
 <212> DNA
 <213> Eucalyptus grandis

<400> 160
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 tgaatggcat gtattgttct tctcgcccca tgaggattgg gcccgctgct aacaaaaagc 120
 ctattgctac ccagcaatat cagagtgcac cttaccagaa cagtcaaggga aaccaagggg 180
 agaatgatcc aaataatata actatatttg tcgggggtct ggatccaagt gtatcagatg 240
 accttttgag gcaagtattc agtcaatatg gagagttgca t 281

<210> 161
<211> 291
<212> DNA
<213> Eucalyptus grandis

<400> 161
ggatacagaa gaagtgccaa gaaatgcaag gagaagtctg agaacgtcca caagtactat 60
aagaggacca aggaaggccg tgctggctcg caagacggca agacctacaa gttcttctcc 120
gagctcgaag ccctccacaa caccgcccgc gggggccaccg tcggaatatc aagcagcttc 180
aagtgggtggg ggtgctgctt ctggcactgc agccctgggc ggtctctcgg tacccccagt 240
ttcgatcggg atatcgctcg ccaaccccg cccaatctcc actgtccgcg g 291

<210> 162
<211> 743
<212> DNA
<213> Eucalyptus grandis

<400> 162
cctctttccc ctgagcgaat ggagatggaa gatcaccacc agtacaccgc ggcagatttg 60
cggcacctca tcaacgcccg tccacctcca cccccaccgc acatccagtc gatctccccg 120
cctgagctat tctgcgccg cggcggccac cggaacccga cgcagcactt ggagtcgatg 180
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ggagagaacg ccaattcgaa ttccatcctc caagctccat ctcttcacac ctactccac 660
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catcaactgc agagaccgtg cga 743

<210> 163
<211> 394
<212> DNA
<213> Eucalyptus grandis

<400> 163
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ttcggcacga gcgagtctga atggaacgcg gcgatccgaa cgttgtcgcc gtcgccaggc 120
tgaggaggga agactgcgaa cgaaccaagc acgactccgc gttcgccact tgggaagggtg 180
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accttgggaa ggcggactgt gtcaggacca gact 394

<210> 164
<211> 1017
<212> DNA
<213> Eucalyptus grandis

<400> 164
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atttcgatag	ctgttttcga	aggctaagat	gggctacgca	cagctgggtca	tcggccctgc	360
cggcagtggc	aagtcgactt	attgctcgag	tttgatcaa	cattgtgaag	ctattgggag	420
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cagtggaatg	atggcatctc	tctctgccat	ggttcaactc	gaattgcccc	atgtaaatat	840
cctgtcaaaa	atggaccttg	tgaaaaacaa	gagagatatt	gatgattact	tgaatccgga	900
acctcgagtg	ttgttgtag	agttgaacca	aacaatggct	cctaagtttg	agaagctcaa	960
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<210> 165

<211> 376

<212> DNA

<213> Eucalyptus grandis

<400> 165

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ggacattttc	tgacggatg	ccgcatttt	gcctggcgac	tggtgaatcc	ggcaacgctg	120
aaatattttg	atgcaccgca	caggccgatg	tatatgcagg	aatatcttta	ttcaatcaga	180
aatcatcggt	ataccgccac	gatgcttcag	catattgctg	aagatcgtga	cgggacgagt	240
cattaaccca	gcacgcagcc	ggttgcaatt	aaattacggt	gtaagtcgaa	gacgtggcta	300
agatcgtggg	gaatatgtcc	gccaggcgca	ttttccagat	agcgaatgca	ataatcccga	360
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<210> 166

<211> 689

<212> DNA

<213> Eucalyptus grandis

<400> 166

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cggcgacgtg	ctctgcttcc	tcttcaactgc	tggtcagttc	atatgcatcc	acgcgtagtt	180
gtcttcaagc	gacgcacatg	ctgattgaag	cgctcctcata	ggcttgtag	atgatccaag	240
acctttcact	gcttggtgata	ctctttataa	aggacgaggg	atgggtcttga	tgaatcagcc	300
catctagaga	ggcttccacc	atatcacagt	ttggacttgt	gccaatgccca	aaagggttcaa	360
gcataaagat	gggagttcca	ctgcaacatt	ctagtgggtat	caaacaattg	aatgttcatt	420
ttcaagagcg	ggacttggtg	tctactcaat	caaccagtca	atcattcagt	gaagtgccta	480
atataggagg	aagtactgac	tgtagccaag	ccacagtttt	agaacagaca	gaacatgggtg	540
aaactgaagg	gcaatcagtg	agaggacaag	caaaatcagc	cttgtcaatg	ggaactcagg	600
athtagtctt	ccaaccttta	gaggtgtgca	tcccactcca	ctatgctgaa	ccatccttgg	660
gtgggtttat	gcccgtgct	tatgggcca				689

<210> 167

<211> 1566

<212> DNA

<213> Eucalyptus grandis

<400> 167

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tctctctctc	tctgggtgac	ccttcttccc	ttttctctgc	gcttccgctg	aagtgaagaa	180
gggcgcccag	gttgctcgtcc	gagatgcgtc	ggagaaggac	ctctctcctg	atttcatgag	240

accgaccacc	acactatgaa	agatctaagt	ttgaggcaat	gggaagtgg	gtctacacct	300
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<210> 168
 <211> 381
 <212> DNA
 <213> Eucalyptus grandis

<400> 168						
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<210> 169
 <211> 331
 <212> DNA
 <213> Eucalyptus grandis

<400> 169						
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<210> 170
 <211> 950
 <212> DNA
 <213> Eucalyptus grandis

<400> 170

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cgcgcgcgc	cgggagctg	ccgccccgag	aggaagctga	ccctcacga	gctctggtcc	180
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<210> 171
 <211> 376
 <212> DNA
 <213> Eucalyptus grandis

<400> 171						
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gattcgcttg	ccgaggaacc	gaacccgact	ctggctcgga	accttcgaca	cagccgagga	240
tgcagccctg	gcctatgacc	gcgaggcggt	caagctacga	ggggagaatg	ccaggctcaa	300
tttccccgag	cttttcctca	acaaggacaa	ggctgaggaa	tccgctgggtc	caagctcgtc	360
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<210> 172
 <211> 427
 <212> DNA
 <213> Eucalyptus grandis

<400> 172						
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aggccgagat	cctgaaaacta	agagaagagc	gggagaactc	gcagcatgag	atcaaccagg	360
tcatacgagcg	gtttcgctat	gccgagtgca	ggtgtcggcg	gatgttcctc	ttcctctcca	420
aagcagc						427

<210> 173
 <211> 607
 <212> DNA
 <213> Eucalyptus grandis

<400> 173						
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tttcagata	cagttactac	gtaagcaatt	ccaaaatatg	gaacaaaaac	agacgcactt	240
gatcaccgtc	ttagctcaat	taatgcagaa	gccagtatct	gcttctcttt	ttacgcagca	300

gtcggatagc	cctaccaaaa	agagaaggtt	ggcggaaactg	gatcatttac	atgactcaga	360
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ttctctacta	gatttggact	ccgttgagaa	actggagcag	tctttgcact	ttttagaaaa	480
tctccttcaa	ggagtcgata	acacttcagg	cgcagaacag	cacgacttcg	gagcaatatc	540
gttgcccttg	ccggcgggtt	tcaccgagag	aaaggaatct	ttggatgatt	ctgacaggca	600
tatccac						607

<210> 174
 <211> 719
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 174						
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tagaatctgg	cgttatgcag	ccaaaatcta	aaatttcaaa	cggggtagat	gctcatccac	240
atagcatcca	gactagtgc	gtattcactg	aaccctgggtg	gcgtggctat	aatactatct	300
ccccagctga	cccaggaaga	aacgaaaccc	atgcgccttt	aggatgcata	aatgggtggtt	360
cagagtccaa	tgggtggtcaa	tcacagtcaa	atgaggaaag	ggttgaggaa	gatgatgatg	420
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aagatccata	ttatgggggg	ttgatggcac	aatatgggca	tcagtcaatg	gcttatcctt	660
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<210> 175
 <211> 570
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 175						
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acccaatttg	ttggtgatga	aaatcgctcct	cctgctcagg	ttttccgtga	cagaatcatg	120
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caaactttgt	atccgcacat	tgtgatgcag	tttgaaaccg	actatgtggg	tcaaagcaca	420
ttgtctatga	atgatgattt	atttaacacc	aagtacaagg	acaagctgga	accatcttat	480
aagggactca	ttcatgaagt	gttcaccacc	atcttgccgg	gtttatccgg	tgccaaagtc	540
acgaaaccag	gaaaattccg	tagttctcaa				570

<210> 176
 <211> 754
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 176						
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gcagctctaa	tggatatgct	ggagcaaagt	gtgtcgggta	tgggcgaccc	aattcagcgt	120
cttggtgctt	acctcttgga	agggtctagg	gcgaaattga	aatcttccgg	gagcataatt	180
taccgaaagc	tcaagtgcga	agaacctacg	agctcagaat	tgctgactaa	catgcagggt	240
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cagtgggtca	ctttcatcca	ggcctctcga	cagaggcctg	gtggccccc	cctcctccgc	420
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gcagtgaact	gtccttacat	attgcatcac	ataccgatg	agagtgtgag	cactcagaat	660
caccgagacc	gggtgttgag	actgatcaag	agtttgctgc	cgagagtggg	gaccctcggtg	720
gagcaagaat	ccaacaccaa	cacatcctca	ttct			754

<210> 177
 <211> 525
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 177						
ggaaattggg	atgaacctac	gaaggaagaa	gttaatgaac	cagctgatat	agctgaagca	60
aagactgtca	gtgattcaga	ggaagcaaaa	cctaattgcta	agagaaaaca	gcctgagaag	120
gaagcttctg	agaaggaagc	ttcaaagaag	gaaccaaaaca	aaccacccaa	tagttgggtt	180
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cgccctgggtg	gcaagggtacc	gatgtcgggt	agccaagcta	agtttgagca	gaaagggtgat	480
aaatttattt	ctaaacaagt	ggacggcaag	aagaaaagaa	actga		525

<210> 178
 <211> 978
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 178						
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gatgttccac	ccatggcttc	ttaatctgat	ccagatgaac	catggagaaa	caaaatcgaa	180
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tccaaaagca	ggtcttcaga	tcatcaaagg	ggcagcattg	cagagcaaga	cgaagattca	900
aataacgtgg	caacagacct	tgaacttaag	atgcctggaa	catcatcaca	tcaggacttg	960
acgtccggag	aaaagaag					978

<210> 179
 <211> 566
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 179						
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aatgtatcaa	agatggataa	ggcttcactg	ctccaagatg	cggagtctta	tatcagggag	240
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gatgcagtgg	ttcgagtaga	gagcgccgg	aaggatcatc	ctgcagcaag	gttaatggtg	480
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<210> 180
 <211> 521
 <212> DNA
 <213> Eucalyptus grandis

<400> 180						
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gagagcctca	ccgtcctcct	aatccgacga	tcgacgttcc	tccctggccg	atcctggacg	120
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cgtacgcccc	tcccgccgag	aaggccccgc	ggcgggaccc	gcggaagtac	cactactccg	480
gcaccgcgtg	cccggagttc	cggaaggggga	gctgccggaa	g		521

<210> 181
 <211> 449
 <212> DNA
 <213> Eucalyptus grandis

<400> 181						
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gcggggggcg	gaggtcgcac	gagtgtctca	tatgccacaa	gtccttcccc	accggccagg	120
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<210> 182
 <211> 610
 <212> DNA
 <213> Eucalyptus grandis

<400> 182						
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cgccaattcg						610

<210> 183
 <211> 767

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<210> 187
 <211> 574
 <212> DNA
 <213> Eucalyptus grandis

<400> 187						
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ccgaacccgg	attctctctc	gctgcttcaa	tccgcgcgaa	ccccaaatgc	acctccggag	120
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<210> 188
 <211> 988
 <212> DNA
 <213> Eucalyptus grandis

<400> 188						
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<210> 189
 <211> 536
 <212> DNA
 <213> Eucalyptus grandis

<400> 189						
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 <212> DNA
 <213> Eucalyptus grandis

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<210> 191
 <211> 473
 <212> DNA

<213> Eucalyptus grandis

<400> 191

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<210> 192

<211> 468

<212> DNA

<213> Eucalyptus grandis

<400> 192

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tttctcagat	tcaaagtcta	agaaaggaga	acacgacttt	gttgtccgaa	tctcattatg	360
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<210> 193

<211> 968

<212> DNA

<213> Eucalyptus grandis

<400> 193

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<210> 194

<211> 345

<212> DNA

<213> Eucalyptus grandis

<400> 194

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ctgaaggagt	agctgggaaa	tcacacggaa	atcactcttt	aactcggcag	ccatcaatat	300
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<210> 195
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 <212> DNA
 <213> Eucalyptus grandis

<400> 195						
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<210> 196
 <211> 569
 <212> DNA
 <213> Eucalyptus grandis

<400> 196						
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<210> 197
 <211> 1007
 <212> DNA
 <213> Eucalyptus grandis

<400> 197						
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<210> 198
 <211> 390
 <212> DNA
 <213> Eucalyptus grandis

<400> 198						
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<210> 199
 <211> 586
 <212> DNA
 <213> Eucalyptus grandis

<400> 199						
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<210> 200
 <211> 619
 <212> DNA
 <213> Eucalyptus grandis

<400> 200						
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<210> 201
 <211> 376

<212> DNA

<213> Eucalyptus grandis

<400> 201

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<210> 202

<211> 743

<212> DNA

<213> Eucalyptus grandis

<400> 202

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<210> 203

<211> 435

<212> DNA

<213> Eucalyptus grandis

<400> 203

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<210> 204

<211> 662

<212> DNA

<213> Eucalyptus grandis

<400> 204

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gggggagcgc	cggcgacacc	ttcgatcatct	gggacatcac	tcaattcacc	ctccagttgc	300
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aatcattgca	gaagcaggat	aattccgttg	aagaagtcga	taaaattaaa	atagatgggc	540
tttggaaga	agttgaaaat	ttgaagattg	ataagacagt	cctttcgctg	gagttaggta	600
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<210> 205
 <211> 694
 <212> DNA
 <213> Eucalyptus grandis

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gatgggctac	gatcttattt	cgctgggaagt	agagcctgga	tatgcagcac	tggatcaatga	660
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<210> 206
 <211> 1210
 <212> DNA
 <213> Eucalyptus grandis

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<210> 207

<211> 438
 <212> DNA
 <213> Eucalyptus grandis

<400> 207
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 ccaggccctg ggcggccaca aggccagcca ccgcaagcac gcctcctccg ccgcgggccg 180
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 cgtctccggg aagggtccacg agtgctcgat ctgccacaag agcttcccca ccggccaggc 300
 gctcggcggt cacaagcggg gccactacga ggccccgcc cccatccccg cctccttctc 360
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<210> 208
 <211> 516
 <212> DNA
 <213> Eucalyptus grandis

<400> 208
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 gagaatgata gtcttctcct tggatgatggc ccttgggccg agtttgtgaa cagtgtgtgg 180
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 caggattcta gaaccattaa ctccggaata ccatctgtgg ggtctcttga ttatggaact 360
 ctatgacctg ttaagatgca atttcttgct gtaaatattca gtgttgtcca agccatccgt 420
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 tgtaatgata tttgcttctc tccccaaaaa aaaaaa 516

<210> 209
 <211> 547
 <212> DNA
 <213> Eucalyptus grandis

<400> 209
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 caatgtcgcc gcacactttg atgaaatctt caagctgaaa ggcactgcag caaaagctga 480
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<210> 210
 <211> 522
 <212> DNA
 <213> Eucalyptus grandis

<400> 210
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aacagttatc	tgcggatggg	gttgcatacc	acaagtcttg	cttcaagtgc	agccactgca	420
aaggcacatt	aaagctgagc	agctactcct	caatggaagg	agttctatac	tgcaagcctc	480
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<210> 211
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 <212> DNA
 <213> Eucalyptus grandis

<400> 211						
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<210> 212
 <211> 850
 <212> DNA
 <213> Eucalyptus grandis

<400> 212						
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aagcagtcta	tcacacaagg	gtatctgttg	gcatgcgatt	cagaatgctt	tttgagacag	240
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<210> 213
 <211> 534

<212> DNA

<213> Eucalyptus grandis

<400> 213

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cactggctcg	gaattgatgt	cttacatgtc	catcctctat	caaatttgtc	catactggaa	420
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ccacataatt	gacttccaga	tcgctcaagg	aagccagtgg	atccctatta	tcca	534

<210> 214

<211> 358

<212> DNA

<213> Eucalyptus grandis

<400> 214

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<210> 215

<211> 988

<212> DNA

<213> Eucalyptus grandis

<400> 215

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<210> 216

<211> 669

<212> DNA

<213> Eucalyptus grandis

<400> 216

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<210> 217

<211> 334

<212> DNA

<213> Eucalyptus grandis

<400> 217

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<210> 218

<211> 478

<212> DNA

<213> Eucalyptus grandis

<400> 218

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<210> 219

<211> 1677

<212> DNA

<213> Eucalyptus grandis

<400> 219

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tgatgattat	gtgtgataaa	tgctgaaact	ctgatgacag	caatagcttg	ttctgttggc	1620
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<210> 220

<211> 916

<212> DNA

<213> Eucalyptus grandis

<400> 220

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gccagaagc	ccacgaagct	gtaccgggga	gtgaggcaga	ggcactgggg	gaagtgggtg	120
gccgagatcc	ggctacccaa	gaaccgcacc	cgctctggc	tcggcacctt	cgacacagcc	180
gaggaggccg	ccctcgccca	cgacaaggcg	gcgtaccggc	tgcggggcga	cttcgcgcgg	240
ctcaacttcc	cgcacctcaa	gcacaagggg	tcgcacatcc	agggcgactt	cggcgactac	300
aagccgctcc	attcctccgt	ggacgccaag	ctccaggcca	tctgccagga	catggccgag	360
aagccagccg	acggcaagaa	gaggcgctcg	gccccgcgg	gcggcggcag	ctccgcagct	420
gccgcctcgc	cgcggaagcc	ggagccggag	ccggagccgg	tgaagacgga	ggtgggagt	480
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gagaacttct	cactgcagaa	gtaccgctcc	gagatcgact	gggctgctat	ctattcttga	660
agcctttttt	cacttctcat	catcatcatg	tcatgtccag	ttttctccag	tagtttcgtc	720
ttctttctct	ttcgaatttc	caagaagcgc	agtatgtaat	atgttaggag	taatttaggg	780
aaagcagggg	gctctgctgc	gatggagttt	ttggcagttg	cagcggccac	tgctaagcct	840
tgtatcgtcg	tgtaaatccg	accacggtcc	cgccgggggt	ttaagtcggc	ggcgccgggg	900
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<210> 221

<211> 567

<212> DNA

<213> Eucalyptus grandis

<400> 221

gcgttgatct	gctcctgatc	atggccctga	tcgtatggaa	cgagcatggt	caatctctgg	60
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ggaccgcaga	agccatggaa	gccgggcatt	tccttggata	aacctgtctc	ctccttggga	180
ttcttttctt	ttctcagacc	agttaactca	gctaaaatgt	cgtgtattat	attgtgatgt	240
gagaaattac	ttctaatttg	tattatcacc	atcttcttct	gtagccacac	tatgaaagat	300
ctaagtttga	ggcaatggga	agtgggtgtc	acacctggca	atgaaggaaa	gacagcgttg	360
gagagctgaa	gaggacgcct	tgttacgtgc	atatgtgaaa	cagtatggcc	caagggagt	420
gcacctgtgt	tctcagcgca	tgaacactcc	ccttaaccgt	gatgccaaag	cctgcttaga	480
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gcgtcttgtc ttccatttgt tgccgtg

567

<210> 222

<211> 985

<212> DNA

<213> Eucalyptus grandis

<400> 222

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aaaaggccgc	gaaagcgagg	taggaaacct	gccaatggcc	gagaggagcc	attgaatcat	180
gttgaggccg	agaggcagag	gagggagaag	cttaaccagc	ggttttacgc	gctccgggccc	240
gtgggttccta	atgtttccaa	gatggacaaa	gcgtcacttc	ttggcgatgc	gatagcgtac	300
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agcgataaag	atctcagtat	ctcgagcaat	cacggtgccca	agttgataga	attggacgtg	480
gacgtgaaga	taatcggatg	ggatgtgatg	atacggattc	aaagcagcaa	gaagaaccac	540
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gtctccgtgg	tgaatgactt	gatgatccaa	caggcgactg	tgaagatgag	tggtcgtttt	660
tactcacagg	aacagctaag	gctggcgctg	tcgtccaaaa	taggataagc	ccatcagaag	720
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gacgcgaata	atcaggggct	gggatatttt	aaggctcccg	gcacagcaag	ttctgaagca	840
agagctgcca	tatgctgttt	gttcctcttg	tagttcttag	tgtagcctgc	tagtgtttct	900
tattaggtac	tttcgattgt	ggagcactga	gaggatatga	aacaagggtg	aattgttgtt	960
gaagataaaa	aaaaaaaaaa	aaaaa				985

<210> 223

<211> 335

<212> DNA

<213> Eucalyptus grandis

<400> 223

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agtcgctgct	tgaaggggaa	actgatgcac	aaaacaagcg	gccctcggct	gcattatctc	120
cagaggatct	cacagacgaa	gagtggtatt	acttggtttg	catgtccttt	gtattcaatc	180
ctggcgagg	tcttcgggga	agagcgctag	cggatggcca	aactatctgg	ttatgcaatg	240
ctcaatatgc	agatagcaaa	gtgtttttctc	gctcactact	tgcaaagagt	gcattctatc	300
agactgtggt	atgtttttccc	tatctcggag	gtgtg			335

<210> 224

<211> 377

<212> DNA

<213> Eucalyptus grandis

<400> 224

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agccgtacag	gggtatccgg	atgaggaagt	ggggtaagtg	ggtggctgag	atcagggagc	180
ccaacaagcg	ctcccgatc	tggtcgggct	cctacgccac	cgccgtggct	gccgcccgcg	240
cctacgacac	cgctgtgttc	tacctcgtg	gccccctctgc	ccgcctcaac	ttccccgacc	300
tcattcttga	cgagggccag	gactcgctgg	gtgaggtctc	agccgcctcc	atccgcaggc	360
gtgcagctga	ggtcggg					377

<210> 225

<211> 394

<212> DNA

<213> Eucalyptus grandis

<400> 225
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aatcttcttt gaccctcggg caatcagaca cagcatagat ttaatctgcc cgaggaaaca 120
caaaagatgg ctttctactgg aaccgtggat aaatgtaagg tttgtgacaa gaccgttcat 180
gtcgtcgaca tgatgactct tgaaggcatt ccctatcaca aaacctgctt cagatgcagc 240
cattgcaatg ggacgcttgt gatgagcaac tattcctcga tggatgggtgt tctctactgt 300
aagacgcatt tcgagcaact cttcaaggaa tccggtgatt tcaggaagaa tttccattca 360
gccaagtccg acaagccgaa tgagatgaca agaa 394

<210> 226
<211> 340
<212> DNA
<213> *Eucalyptus grandis*

<400> 226
gactccccct atccccctctc tttctccctc tcaagaatca agagattact atggaaagcg 60
aacgctacga tgagacgaca gaggggcagc gaatcaagag aaggccgcac cagcagcagc 120
agcagcagca gcagcggcgg cagaagcctt acaggggtat ccggatgagg aagtggggca 180
agtgggtggc cgagatcagg gagcccaaca agcgtctccg catctggctc ggctcctatg 240
ccacccccgt ggccgcgcgc cgcgcctacg acaccgccgt cttctacctc cgcggccctc 300
ccgcccgcct caacttcccc gacctcatct ggcgcgaggg 340

<210> 227
<211> 571
<212> DNA
<213> *Eucalyptus grandis*

<400> 227
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tccatttcgc attctctact acagactcgc agagatgggtg aagagagaca gagaggacgc 120
ggaggtcgaa gccctggcgg tggccaactg cttgatgctc ctcccccgag tcggcgagag 180
cgccgtctcg aaccgcgaat cgcggtctac agagcggatg ttcgcgtgca agacgtgcaa 240
ccgcgagttc tcctcattcc aggcgtcgcg agggcataga accagccaca agaagcagaa 300
gctgatcccc ggcgccctct tccacctcgg ctgcaccgcg gattcctcgc cagccaagcc 360
gaagaggcac gagtgtctga tatgcggcct cgagttcccc atgggccaag cccttggcgg 420
tcacatgagg aggcacaggg ccgccatggc ggagggcttg gcggcagagg cggcgaagcc 480
tgtgccggtg ttgaagagat cgaatagcaa gagagtcatg tgcttggatt tgaactcgtc 540
gctgatggag gacgacttga ccttgcgttt a 571

<210> 228
<211> 726
<212> DNA
<213> *Eucalyptus grandis*

<400> 228
atgaggactc cctggacaag gaacccccctc ctccgcctcc tccgagattc aaggtgcatt 60
ctttctgcaa gaccttgact gcctcggaca ccagcactca tgggtgattc tcagtgttga 120
gaggtcatgc ggacgaatgc ctccccgaac tggacatgtc aaaacaacct cctacgcaag 180
aactagccgc caaggatctg catgggaatg aatggcgttt tcgacatatt ttccgaggcc 240
agccaaggag gcacctactg caaagtgggt ggagtgtttt tgtgagctcc aaaagacttg 300
tcgctgggga tgcatttata ttctaaggg gcgaaaatgg ggaacttcgt gtaggtgtta 360
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atcttgggtg ccttgctacg gcatggcatg ccatttctac aggaaccatg ttcactgttt 480
actacaaacc taggataagc cctgctgagt tcatcatccc ttatgatcag tacatggagt 540
ctctcaagaa gaattactcc attggcatga gattcaaaat gagatttgaa ggggaagaag 600
ctccagagca gaggtttact ggaacaataa tcggcattga agatgctgac caaaagggtt 660

ggcgagatac	aaaatggagg	agtctcaagg	tgagatggga	tgagaattct	gccatacctc	720
gtccag						726

<210> 229
 <211> 752
 <212> DNA
 <213> Eucalyptus grandis

<400> 229						
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cccggagatc	tccggcgcg	cgtccctctc	ccccgatgag	atccagtcgg	ccgcggcgag	240
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gcagttcccc	agcgtggaga	gcgcggggct	gaatctcgat	actctattgg	cttcagacag	540
cttcccgtgg	cgtatctgaa	gtggactgaa	ggaagaagcc	tggccgatca	tttctctctt	600
ttttttttct	ttttttttct	ataattcttt	tgatggacta	gattttgtgg	ggtcgtcatc	660
cacttcagga	taatacagat	gacaagaact	gactttttat	ggtgtaaaaa	gacgtagctt	720
ttttgttggt	tcggttcaaa	aaaaaaaaaa	aa			752

<210> 230
 <211> 563
 <212> DNA
 <213> Eucalyptus grandis

<400> 230						
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acacgtaccg	cgacgagcta	gagcagagca	agcggagcta	caggggctcc	gccgcggaac	120
gggcccggag	gggcgggttc	gggcccgggg	ggacgagtg	gtcggccgcc	ggccgggagc	180
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cgaagcagca	cgcggagaag	cacttcccgc	tgccgggcgg	gccggcgggc	acgatgaagg	300
gcgtactgct	caacttcgag	gacgtcggcg	ggaagggtg	gcggttccgg	tattcgtact	360
ggaacagcag	ccagagctac	gtgctcacca	aggggtggag	ccggttcgtg	aaggagaaga	420
gcctgaaggc	cggcgacacc	gtctgcttcc	agcggtcgac	cgggccggac	aagcagctct	480
acatcgactt	caagccgcgg	ggccagccgc	cggccggccc	ggccgcggcg	ccgcgcggcg	540
ccgtacagat	ggtgaggctg	ttc				563

<210> 231
 <211> 642
 <212> DNA
 <213> Eucalyptus grandis

<400> 231						
agtaaaccac	ccgaccagaa	cctttgtgaa	ggttcacaaa	tcggggacct	ttgggcggtc	60
actggatatt	tcaaaaattca	gcagctatga	tgagctgcgc	agtgaactcg	ctcgcatgtt	120
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gtagtacgt	ggtaagtcta	tctcaagttt	gctttataac	tgtaaaagttt	aacaccacgg	600
atgattgaag	agaatgacat	cgacattccc	gtaaaaaaaa	aa		642

<210> 232
 <211> 1358
 <212> DNA
 <213> Eucalyptus grandis

<400> 232

cgattttaccc	ccctccctct	ctcggcatat	aaaacccgca	ggtgaaaccc	gctctctctc	60
ccccacgcct	tccgcccgcg	tccgactcgg	actcggccga	gtcaacccac	gccccccgcg	120
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actccaggac	ctgccccgtc	cgcgggcgcg	gcggggacgg	cgggggcgcg	gcggccgccc	240
cctcctcctc	ctccccctcc	acctcctcct	ctggcgccgc	ggcgggcgcg	gcggcctcgg	300
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ctccttttgt	cagacttaac	gatgatacta	actcaacaac	ttcaaccagt	atgggactcg	840
atttggaag	aacgcctatg	gagacctcgc	accagaaac	atctgaagg	ggcggatgat	900
ttgcgatgga	atcaattgat	caagtacctc	ttgtaccctg	ttacttccca	tactatttac	960
cactaccctt	tcccatgtgg	cgcgccaaca	tggcgccctc	tgaagatgga	aggggtggtg	1020
agacatctca	tcaccgtgtg	ctaaagccaa	tcccagtaat	tccaaaagaa	cccctaaata	1080
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ctaagatcag	cgacggttta	gttcttgatg	atctttctgt	aaaaccatct	gtattggtgt	1320
cctccttttc	ctgttgatc	tgtttctttt	aggctttc			1358

<210> 233
 <211> 506
 <212> DNA
 <213> Eucalyptus grandis

<400> 233

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gggagtctcg	tggtctactt	tccccaaagg	cacagtgagc	aagttgcagc	atcaatgcag	180
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cacaatgtga	cattgcatgc	tgatctcgaa	actgatgaag	tctatgcaca	aatgaccctt	300
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agcaggcagc	ctacagagtt	tttctgcaag	acgcttacgg	ctagcgacac	aagtactcac	420
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atgcagccac	cttgccagga	gctaac				506

<210> 234
 <211> 420
 <212> DNA
 <213> Eucalyptus grandis

<400> 234

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ctccaagcgc	ccccgcgcgc	accctcagga	ccagccctcc	gaggaggagt	acctggccct	180
ctgcctcatc	atgctcgccc	gccgcccgcg	ccgacccggc	agcagcggca	ggctccacga	240

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ccactacgac	ggcggcagca	gtagcagcgc	cgcccggtgt	gcctcttcct	cagaagccgg	360
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<210> 235

<211> 476

<212> DNA

<213> *Eucalyptus grandis*

<400> 235

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gatgaggcaa	cttaataatg	ttccatcttc	gattatgcc	agtcacagta	tgcatattgg	180
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atttgattac	tccattggga	tgaggttcag	aatgacattt	gaatggtgaa	gaagctccag	360
aacagagggt	ctctggcact	gtaattggat	ctgaggatgt	tgatcctccg	aggtggcctg	420
gatcaaaatg	gagatgcctc	aagggtgcgg	gggatgaaat	cacttccatt	catcgc	476

<210> 236

<211> 799

<212> DNA

<213> *Eucalyptus grandis*

<400> 236

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aacagcatga	gtcctcccc	gcaactggag	tgctcatcc	tggtgtctct	ttgcccattg	120
tccaatatgc	aacgcctcca	caacttggag	cgggacatgc	catgacacca	cctgcttacc	180
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gagtgccttt	gccatcagat	gcagttgagg	aacctgtatt	tgtcaatgca	aaacaatatc	360
atggcatctt	gcggcgctga	cagtctcgtg	caaaagctga	gtagagaaac	aaagctctta	420
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gtcagtcctc	ttagtgggta	gtgtgaatct	gtttgtagtt	ctgagggaaa	cctgctgcat	780
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<210> 237

<211> 298

<212> DNA

<213> *Eucalyptus grandis*

<400> 237

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ttaaagggca	taacaaatta	attctgggat	tcaatacttt	cttgccaaag	ggatttgaaa	180
tatcccccg	cgaggatgaa	acaccaataa	aaaagaatgt	ggaatttgaa	gaagccatct	240
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<210> 238

<211> 521

<212> DNA

<213> *Eucalyptus grandis*

<400> 238
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gccagcacia ccttctcttc aatttcaacc ccaccgacga cgaccgcga gacgagggct 180
cgcccccgcc gccctacgtc ctccgagggg cgccgccacc ggcggagccg tcgcctgcag 240
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tggtgatacc gaagcagcac gcggagaagc acttcccgtc ggtgggagag gcgaccagc 360
agctgagctt cgaggacgag tccgggaagt ggtggaggtt ccgctactcc tactggagca 420
gcagccagag ctacgtcctc accaagggtt ggagccgctt cgtcaaggac aagcgctcgc 480
acgccgggga cgtggtcctc ttcaccgcga ccgcgccgac g 521

<210> 239

<211> 337

<212> DNA

<213> Eucalyptus grandis

<400> 239
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cgacgtcatc tcgtgggggg agagcgccg gacgttcgtg gtgtggaaga cggcgaggtt 180
cgccaaggac ctgctcccca gctctttcaa gcacaacaac ttctccagct tcgtccgcca 240
gctcaacacc tacggcttca gaaagatcgt gccggacaaa tgggagttcg ccaacgaccg 300
cttccagcgg ggccagaaa aactcctctc cgagatc 337

<210> 240

<211> 334

<212> DNA

<213> Eucalyptus grandis

<400> 240
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agagctcagg atggaattct taagtacatg ttgaagatga tgggtggcca ctggaaacga 180
ggactggtgg cccagctgg gtttgccgaa ggatcaagga gccccgccct acaagaaacc 240
tcatgatctt aagaaggcat ggaaggtagg tggtctcacg gcggtgatca agcacatgtc 300
ttctgatatc gccaaagatac gcaagctcgt gagg 334

<210> 241

<211> 422

<212> DNA

<213> Eucalyptus grandis

<400> 241
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agaagaagaa ggcggagat ggatcagtg aggcaggtt tgggagcgtc gacttccgtc 180
caccctcagc agcaccagca ccagcaccag caccaccgt ccagcaggt gcacgcctc 240
cacgacagc ccaggcaag gcagggaagc gacgtcaggg atcccggtgc gcgaggaaga 300
gtccagaagg ccgaccgcga aaagctaagg agggatcgtc tgaacgagca cttccttgaa 360
ctggggagca cgctagatcc tgatagacct aagaatgaca aggcaaccat tctcacggac 420
ac 422

<210> 242

<211> 737

<212> DNA

<213> Eucalyptus grandis

<400> 242
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 ctgaatctac cgaacccttc tcgccgaagg aggagagaga gagagagaga gagagagaga 180
 cggaagacc atcgcttttc gccatcgctg gcacgagcag tcatgaggag aggcagatgc 240
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 gctgcggcgg cggcggcgga acccagatac aggggcgtcc ggcggaagtc gctgggccga 360
 tacacggccg agatcagaga ccccgggacg aagaagctcg tgcggctcgg cactttcggc 420
 tcgccggagg aagcggcgcg tgctttcgac gcgaaggccg tggcggtccg cggggtcagg 480
 gccaggacca acttccccgt cgcgccgtcg agtttccctc cggccgcttc tcgcgatctg 540
 cgagctcctg tgattgaatc cagaaagttc ggtcggagag gcgctcgaga tcttcgcggc 600
 gaccaccacg acgtcagccc gcagagaccg acctcgagca gcttaagcag caccgtggtg 660
 tcgtccagtg gtctctgacc gtcgccgtcg ccggagacgg cgaagcggcg gactaggact 720
 ccgccgcgcc accgccg 737

<210> 243
 <211> 542
 <212> DNA
 <213> Eucalyptus grandis

<400> 243
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 tccaaaacaa cagcctaatt tgaatcctga ctttggtcc tcttgatag taaacccgat 180
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 tccccatctc ctccggccga aagccctctc aatgaagcgg gtgggagtcc ctccgaaacc 420
 caacaagctt tacaggggag tgaggcagag gcactggggg aaatgggtgg ctgagatcag 480
 acttcccaag aacaggacac gcctctggct cggcactttc gacaccgccg aggaggctgc 540
 tc 542

<210> 244
 <211> 848
 <212> DNA
 <213> Eucalyptus grandis

<400> 244
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 gccggctaac ccaagcgctt tttcaccgta tacaaaccgg ctgccgagtc aagaccgagg 180
 gttcatgccg aaccggggga ataatatgaa caagcgggtg atggagtctt tgaggaggag 240
 ctggggccgaa ccgagccaga tccaagaatt cgaccgcgaa cgggggttttc gacacatgct 300
 gagcgagagg atgaggaggg agaagcagaa gcgtagctac tcggcattgc tctccgaatt 360
 gcctcatggt accaagaatg acaagaactc catcgtccaa acagcttgca tgagaatcaa 420
 ggagctggtg aagtacaagc aagagctgga gagacaaaac ggggagctga agtctggact 480
 gaacgagaag agcggagggg acaaagctga agggaccaag atcagagtcg agattgcgaa 540
 cccgacgtcc gggattgatt ctatgttgga ggtcctcaag tgcctggaca acatgggact 600
 gaaagctacg gcgattcaaa cgcagtgtct ggccgaccaa ctcttcgccg tgatcgaggt 660
 tgaaaatgag gtatgtgcac aacaatccga tgccaatgta cactaatcac tggttcatgt 720
 tcttcgcacg tgattttcat ttttctcgaa tgtaaagtaa gaacttgtac gatgttcatg 780
 cagcacaagt tcgaaatttt ccagttccat gggaaggtcc ggcgtcttcg tttctggtgc 840
 caagcatg 848

<210> 245
 <211> 181
 <212> DNA

<213> Eucalyptus grandis

<400> 245

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agtgggtggc	ggagatacgg	cagcccaaca	gccgggaccg	catctggctc	ggctcctacg	180
c						181

<210> 246

<211> 117

<212> DNA

<213> Eucalyptus grandis

<400> 246

cgagctgctg	cgatccaga	ggaagaggaa	gaggatggag	tcgaaccggg	agtcggcgaa	60
gcggtcgcgg	ctgcggaagc	agcagcactt	ggacgagctc	acgaccgagg	tgggtcgg	117

<210> 247

<211> 597

<212> DNA

<213> Eucalyptus grandis

<400> 247

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aaaggaagga	aggtaaaaag	aaaagaaaag	gaagccatgg	ctccgagaga	aaagcccagc	120
gtcgccgcca	tcccaaacc	taacggcgct	aaggaaatcc	gtttccgggg	cgtccggaag	180
aggccctggg	gccgctacgc	cgccgagatc	cgggaccccg	gcaagaagac	ccgggtgtgg	240
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ttccgcggcg	ccaaggccaa	gaccaacttc	cccacctccg	ccgagctgat	ctcctcctcc	360
cgcagcccca	gccagagcag	ctccctcgac	gagccctccc	ccccgccgcc	ggccggggcc	420
gtccaggccg	cgcctctcgg	cccgcccttc	gacctcagcc	tcggccgcca	ccccgtcgcc	480
gccgcgcgcg	ccgggcccgg	gccttacttc	cccggcgcg	ccgcaatgtg	cttcccgggtg	540
atgccccccg	cgccgcggcc	ggtgttcttc	ttcgaccctt	tcggccgcat	ggagcat	597

<210> 248

<211> 361

<212> DNA

<213> Eucalyptus grandis

<400> 248

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atgcgacaaa	aacttgcttg	aatgatctca	tggtcttccc	tactcgtaat	gccttggtact	120
ctcaagtgtt	gctgcaaagt	cagaaaagct	tgctgccttg	cagaacgaat	atcattttgc	180
taaagcaagg	attgatgaag	atcatgagaa	ggcgacgcga	ctggagaaga	aggtcaaaac	240
tctcacattc	ggctatcaga	tgccgggagaa	gactcttcga	gaccaaattg	agtcaacctt	300
caagcagctg	gacactgcag	ggacagaact	cgagtgtttc	ccagctctgc	agaagcaaga	360
g						361

<210> 249

<211> 472

<212> DNA

<213> Eucalyptus grandis

<400> 249

ccatcgtcac	ctgtatccac	aaaaacacac	ccaccttacc	tctgcacccg	ccccaccgcg	60
ctatcgcagg	gcctgcgata	cagacgcttg	gctgcgaagc	atgaagagaa	gccctccgct	120
gtgctcgaca	aatcccaaga	tcccacagac	agcgcaaagc	catccaagaa	gccccgccat	180

cgtcacagtc	ccacccagct	cgctgccctc	aacgaactct	ttgagaaaag	cgaacacccc	240
actcttgagg	agcgaggcca	gttggctgag	aaattaggaa	tggagacca	gaccgtcaat	300
gcatggtttc	agaacaagcg	tgcttctact	aagaagcgca	ataagggggg	aacctcgga	360
cctcaccag	ccacgagtca	gaacgacttg	tccgaagatg	ctctcaaaac	cccttcgcga	420
ctgccgtcga	tagcgaacct	gctcaacgac	gcaccctcat	cggcctcgcc	gc	472

<210> 250

<211> 302

<212> DNA

<213> Eucalyptus grandis

<400> 250

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gcgcaaacgc	caacgcaccc	tcgacatgca	cgccggcgca	ccaggtccca	acgatgccat	120
tgacgcgaac	agcgtcggcg	acaacgcgtt	catcgcggat	cacgacgcaa	ttgactcggc	180
cggcgacgac	gacgacgacg	aagacaagcc	caagaccggc	cagaagcaag	gccgccgcaa	240
aataaagatc	gagttttatac	aggacaaatc	gagacgccat	atcaccttct	ccaaaaggaa	300
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<210> 251

<211> 708

<212> DNA

<213> Eucalyptus grandis

<400> 251

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ttttgtgtca	gtcatcttgg	tggggttcct	gattcacaa	cttcttcata	cgcagcagag	180
catgttaata	cacatcagac	tcaagagata	catttgccag	tgccgcagga	caatgcagat	240
ctccctgatg	caaacttttt	ggtttcggaa	actgcaagtc	ctgactatct	tgaaactctg	300
tccgcagctt	tagatgggac	catggatgtc	gagtcagatg	cttttctctc	tgaacgagat	360
gcgggaatta	tgctggatga	tgtaactaat	cttccagcga	tcagtgatgt	cttctgggaa	420
cagtttcttg	cggcaagtcc	acttactgca	gacacagagg	agattagtct	gacctctcat	480
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gcccattaca	tggtatcatct	taccaaacag	atgggtcatc	tcacctccaa	caacggaaca	600
ggatgatatg	ttcttatcta	ctttgtacac	tggtataatct	ctttcagact	agaggtgaat	660
gccaatgcag	gatgcgaata	acaaattatg	ccaaaaaaaa	aaaaaaaa		708

<210> 252

<211> 563

<212> DNA

<213> Eucalyptus grandis

<400> 252

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catcaatcaa	gtcgaagcac	catcacctca	agaagaaaga	aggaaagaaa	gagagaagga	180
ccggagaccc	gacagagggt	cgcgcgcgca	cgagacatgg	gacgatcccc	ttgctgcgag	240
aaggcgacaca	cacacaaggg	cgcggtggacc	aaggaaagag	accagcgctt	catcgactac	300
atccgcctcc	acggcgaagg	ttgctggcgc	tccctcccca	aatctgcccg	gcttctcagg	360
tgccggcaaga	gctgcaggct	cagggtggata	aactacctcc	gccccgacct	cagcgcgcca	420
acttcaccga	ggaagaagac	gagctcatca	tcaagctcca	cagcttgctc	ggcaacaagt	480
ggctctctgat	cgcgggggaga	ttgcccgga	gaaccgacaa	cgagatcaag	aactactgga	540
acaccacat	caagcgcaaa	gct				563

<210> 253

<211> 397

<212> DNA

<213> Eucalyptus grandis

<400> 253

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atggagatga	agggaggggt	cgtcccga	gaggaggagg	cgtcgtcggg	cgtggggcag	120
ccgccgccgc	cgccgccgcc	gccgccgcag	cccatggagg	ggctgggcga	agcggaggcc	180
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tcgtggagcg	aggggaggaa	cagcttcac	gtctgggacg	cccaccagtt	cgccgtcacc	300
ctgctcccca	agcacttcaa	gcacggcaac	ttctccagct	tcacccggca	gctcaacacc	360
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<210> 254

<211> 353

<212> DNA

<213> Eucalyptus grandis

<400> 254

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aagaataatt	ttcccttccc	ttttctcttt	ttgagccctt	tagagttaca	tgtcttgggt	120
agcaatgacg	gggaactttg	ggtggggctc	aaactccatg	gaagaggcgt	ggaggaaagg	180
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aagatggaac	tctgtagcta	ggctcacagg	gctcaagagg	aatgggaaga	gctgtagatt	300
gaggtgggtg	aattacttga	ggcctgacct	gaagagaggt	cagataaccc	ctc	353

<210> 255

<211> 541

<212> DNA

<213> Eucalyptus grandis

<400> 255

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ctccaacgct	tcctccaacc	cccagtcgat	ggccacctcc	acgacgtcgg	cgaccacgcc	180
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tgcccagaaa	tacttcttga	aagtccaaaa	gaatggggca	gltgcacatg	ttccacctcc	420
tcgtcctaaa	cgcaaagctg	ctcatcccta	ccctcaaaag	gcatcgaaaa	atgttttagt	480
gccgctgcaa	gcatccatgg	cccagccttc	ttcaacaaat	cctgctttta	caattacacc	540
t						541

<210> 256

<211> 477

<212> DNA

<213> Eucalyptus grandis

<400> 256

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cttgatcgct	ctcatctcgc	tctcgcgaat	gttgctctct	gtcttctcct	ctgtccgccca	120
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cgctctgtgt	cactcttgct	ttctcccgac	ttttctggga	ttgatgaaaa	tggcggaaag	240
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ggtgagatcc	tccaagcgga	gcaagcacc	ggtgtaccgc	gggggtccgga	tgaggaaactg	420
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127

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<210> 258
<211> 360
<212> DNA
<213> Eucalyptus grandis
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<210> 259
<211> 318
<212> DNA
<213> Eucalyptus grandis
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<210> 260
<211> 503
<212> DNA
<213> Eucalyptus grandis
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<210> 261
<211> 546

<212> DNA

<213> Eucalyptus grandis

<400> 261

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agtgggagaa	aatgagcaca	aatggtttgc	tgaagtttga	ccaaagtctt	tagtgagatg	120
gttgctgtct	ccccgttctc	ctccaaacag	atgtctgatc	aaataactta	cttgaccgcc	180
agtatgaact	ctccttttagc	ccagcttggt	aacccaagaa	ggatgcacac	ctacgagcca	240
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gacaagggtac	agagacgtct	agcacagaac	cgtgaagctg	ctcgaaaaag	ccgtctgcgg	480
aagaagaaat	atgtacaaca	actagaatca	agccgcttga	agctagcaca	gttggagctg	540
gaactc						546

<210> 262

<211> 883

<212> DNA

<213> Eucalyptus grandis

<400> 262

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agtaccgggc	ggaccactcg	atccccggga	acggcgagga	cgcgccacc	atcgggcccca	180
ttcctcacac	cttgcaagaa	ctgcaggaca	ccactctcgg	gtcgtcttta	tcggctctga	240
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ggccaagggt	gtctacaggc	gagcttttga	tccatccact	ggtttctcaa	atcaaaggag	780
aagttaatga	aaccaaaacc	aattcgcggc	tagtttcaaa	gaggaatcaa	ccatccgatg	840
agccgaaggc	gaagatggat	cagaagatat	acacatgcga	gtt		883

<210> 263

<211> 454

<212> DNA

<213> Eucalyptus grandis

<400> 263

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ctaaaatcaa	agctcttctt	gagattctac	agtcgcaatg	cagaggagaa	agtgcaaagt	120
cagagcttca	tgggtcccatg	ggctgtgacg	atgagctctc	ttttgaaaat	acaggcaccg	180
gggattctac	atacagagtt	aaagctgtta	agcacacaac	tgtttattca	agttctcctc	240
ctgaaggacc	aattaaagca	attgtctttt	ctcagtggac	gagtatgtta	aacttggttg	300
aacaaaatct	gattccatttt	ggcataaatt	atagacggct	tgatggaaca	atgacccttt	360
ctgcaagaga	caaagctgtg	aaagatttta	acaccgatcc	tgagatagtc	gttatgctaa	420
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<210> 264

<211> 579

<212> DNA

<213> Eucalyptus grandis

<400> 264
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 gatgaggggtg acatgatgct tgttggggat gacccgtggc aggaattttg tggcattgtc 120
 cgaaagattt ttatttatac tagagaggag gttcaaaaga tgaagccagg gactattagt 180
 gccaaagatg aggacaattt gatggtcgat gaaggggtgt tttcaaagaa aatgacttcg 240
 gacacgctgc cttcggcgctc tgacccaaag aactgttaaa attctctcat gtctgtgagg 300
 tctttaaagt cattggagaa gcctaatacca gccgctacag ttccctgatg ctgaaattca 360
 tctttgtcca cggggactgc acataatctt ctctgtctat atcctctgtg cttcagtgc 420
 cattttctgc cccgcaaagc cgtatttgta tcatcaatgg gattcttgga tttggcttca 480
 agatgcatgg cccctgagg aggccagaga gcctgacaga gaactacggc agattgaaaa 540
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<210> 265

<211> 366

<212> DNA

<213> Eucalyptus grandis

<400> 265
 atcgaggccc tgaaaaaacg gttggacgat gtgaatgcc aagtatgcggt ctcggtcgag 60
 ttcaccaagg ccatggcact gaaccacctc aagaacggcc tgcctcgcgt ttttaaggca 120
 ttgatggaat tctcaggtgc ttgactaag gtattcgagg ctttgaataa cccccgcgag 180
 caggtaggca gtcgtgagaa tgagccgcgg gttttgcctg cgtgatttca tggatgcctc 240
 aggccgtgtg tataatttgt ttcaacattt ggtaaacctt gataagggtg cattgcattt 300
 gcatagaaat actgtgaaat tcttttttaa ttttggtttg atcttagctt gaaaaaaaaa 360
 aaaaaa 366

<210> 266

<211> 376

<212> DNA

<213> Eucalyptus grandis

<400> 266
 gcagattctc cccccgaacg ccaagatctc gaaggaggcg aaggagacga tgcaggagtg 60
 cgttttctgag ttcacagct tcgtcacggg tgaggcctcg gacaagtgcc acaaggagaa 120
 gcgcaagacc gtgaacggcg atgacatcgt ctgggcactt ggggtccctag ggtttgatga 180
 ctatgccgag ccgctcaagc ggtacttaaa tcggtatcgg gaggtcgaag gggagagggc 240
 cagccaaaac aaggtcacag gcggcgaaatc aagaaacgag aagaacttgt acggggatga 300
 gtcgcccggag aagcagctgg gcgctgcctc ttcgtcgcct ctgaagtctt ttgatgtggc 360
 cgacaggagt accaat 376

<210> 267

<211> 341

<212> DNA

<213> Eucalyptus grandis

<400> 267
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 cacaacgggc cgggtcttcgt ggaccgcttc aacgagtcgc tgcactacta ctccaccttg 180
 ttcgactccc tggagggctg cgccagcacg caggacaagg ccatgtcgga ggtctacctc 240
 gggaagcaga tctgcaacgt ggtggcgtgc gagggcgccg accgggtcga gcgccacgag 300
 accctcgccc agtggcgggt ccgcctcggc ggcgcggggt t 341

<210> 268

<211> 343

<212> DNA

<213> Eucalyptus grandis

<400> 268
 tcgctgttca atacctccaa gtcgaacaag cacctctggg agcagatctc gtccaagatg 60
 agagagaaaag ggttcgatcg ttccccgacc atgtgcacgg acaagtggag gaacctgctg 120
 aaggagtata agaaggccaa gtaccaggat agaggatccg cgaagatgtc gtattacaag 180
 gagattgagg agattctgag ggagaggagc aagaataatc agtataagag tccgacggcc 240
 tcggctttga aggtcgatcc ctacatgcag ttttctgaca aaggcattga ggatgctggg 300
 atgactttcg gacctgtaga agcaagtggg aggccgactc tca 343

<210> 269
 <211> 546
 <212> DNA
 <213> Eucalyptus grandis

<400> 269
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 tgccccacac ggttgatatc aacttcttgg ttggatctgg ccagatgtct caggagacgg 120
 agacattgat ggagattatc tccaggaggg acctaaagga gattctctgt gcttgtgcta 180
 aagcagttga agacaacgac accttaaaat ttgagtgttt aatatcagag ttacgcccga 240
 tgggtgtctgt ttccggtgac ccgatccaac gattatcagc atacatgttg gaagggctca 300
 tagcaagatt ggcaagtctg ggaagctcta tttacaaagc tttaaagtgc aaagagcctg 360
 ctggtgcaga gctgctatcg tacatgcaca ttctctatga tatatgtcct tatttcaagt 420
 ttgggtacat gtcggcgaaac ggatcaatcg cagaagtcag gaaggacgaa aacattatcc 480
 atataatcga ttttcagatt gctcaggagg gccagtggat caccctgatt caggctcttg 540
 cagcac 546

<210> 270
 <211> 283
 <212> DNA
 <213> Eucalyptus grandis

<400> 270
 cccattttc ccgtttctcc catattcctc aagcactctc atttagggaa tgagtgccta 60
 gaagccacct caagtttcaa atttttttcc tgcgcagttc tcaattcaaa tggcacgtag 120
 ctcatgtaat cagaaactga ggaaagggtt atggtcgcct gaagaagacg agaaactgtt 180
 caattatata agtagacatg gggtgggatg ctggagttcg gttccgaagc tagctgggtt 240
 gcagagatgt ggaaagagtt gcagattgag gtggatcaac tat 283

<210> 271
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 271
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 gcaaaaagaaa gaaagtaaaa agaggtatct ctgctgcttt attagtttat tgtggagtat 120
 ggcaagtgga atggagaacc ggggggaaat tcctgcgaat ttgaagaaac agcttgctct 180
 gggtgtgaga aaaatccaat ggagctacgg aatcttctgg tccatctcaa ccagacagcc 240
 tggggtcttg gagtggggtg atgggtacta caatggagac atcaaaaacca ggaaaaaat 300
 tcaagctgtg gaacttaata ctgaccagat tgggtatgcag agaagcgagc aactgaggga 360
 actatatgag tctctat 377

<210> 272
 <211> 548
 <212> DNA
 <213> Eucalyptus grandis

<400> 272
ggaatatcca gaggaatgag taccataatc tttttaactt catcagtggg aagggggtga 60
agatcatgaa cttgggagag cagggcgctg atggagtacc aggcgttctt gatgtggatg 120
acgacgatgc tgtcgatccc catcttgagc gcatcaggat tgaagccggt gtagatgaaa 180
gtgatgaaga ggatgaagat tttgtcattg ataaggatga tggaggatct cctactgatg 240
attctggaga tgacgagtc gatgtcagtg aaagtggaga tgagaaggag aaagagaagt 300
atgggaaaaa ggaatctcga aaagaagtca aagcatcatc aagcaagaag aaagcaaaaag 360
ctggagatga agaggggtcg aagaagaaga aacagaagaa gaaagacccc aatgcaccaa 420
aaaaggctat gtctggttat aactttttct tgcagacgga aagcgagaaa atgaagagaa 480
ctaattcccgg tctttccttt ggggatgtat caagagaaat tgcagacaag tggaggggtt 540
tgtcagcg 548

<210> 273
<211> 420
<212> DNA
<213> Eucalyptus grandis

<400> 273
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ccttggctcc gttctgttgc ttcctctctc tgtcttcgac acttcaactg tgcgagccca 120
aaaatcgatc cttttctgct tccttttgcc tctgttccaa gagtcaattg atactgggtc 180
gatctggctg gcaacttttg ttggaagttt gaggaatctg attgagagaa gaggtagatc 240
taaaggatca aaaggatgtc atttaccggc acccaagtta aatgcaaggc ttgcaaaaag 300
acagtttatc ctgttgaaca gttatctgct gatgggggtg cataccacaa gtattgcttc 360
aagtgcagcc actgcaaagg cacattaaag ctgagcagct actcctcaat ggaaggagtt 420

<210> 274
<211> 454
<212> DNA
<213> Eucalyptus grandis

<400> 274
gataaatcgt cttcaccagt acctccgcag gatcagacgg gtgttcattg ttatcatcct 60
gattgggctg ctatgcatgc atactatggg ccaagagttg ctcttccgcc ttattataat 120
tctgctgtat catctgggtc tggctcctcat ccctacatgt gggggccacc acagcctatg 180
atgccacat atggggccacc ttatgctgca atatactcac atggagggtg ttatggacat 240
cctgcaattc ctcttactcc gactcccttg gctgcggaaa ctcttaaaaa gtcactgct 300
aattctgata atggactggg gaagaagttg aaaagttttg aagggttgc aatgtcaata 360
ggcagtgagg gggatgcaga cagtgtgac gatgggactg ataaaagggtc atcacagagt 420
gcagactcgg gagactcaag tgatgaggat caat 454

<210> 275
<211> 620
<212> DNA
<213> Eucalyptus grandis

<400> 275
gcgatttaaa cagctactgg aggaggcatc acaggatatt gatcacacaa ctgactatta 60
cacttttaga aagaaatggg gcaatgatcc acggtttgag gccttggatc ggaaagatcg 120
agagaattta ttgaatgaaa gggctcctccc tttaaaaaag gctgctgaag aaagggtc 180
agcaatgcgt gctgctgcca cttctagttt taaatccttg cttcgagata gaggagatat 240
aactgtcaat tcccgttggg ccagggtaaa ggatagtctc agggatgacc caagatacaa 300
gtcagtgaa gcatgaagaca gggaggcctt gttcaatgag tatatagctg aattgaaggc 360
tgtggaagac agagaagaaa aggaggcaaa agctaagagg gaagagcagg agaagctgaa 420
ggaaagggaa agagaattgc gaaaacggaa ggaaagagaa gaacaagaaa tggagagggt 480
acgagtgaat atacgcagga aagaggcaat tgcactcttt caagcattgc ttgttgaaac 540
aatcaaggac cctcagcttc ctggacagag tcaaaagtta aacttgacaa agatcctcag 600

gacgtgacgag taatcctgat

620

<210> 276

<211> 340

<212> DNA

<213> Eucalyptus grandis

<400> 276

gagataaaaga	actactggaa	tacaagaatt	aagcgactgc	aacgcactgg	catgcctata	60
tatccaactg	aggtttgtct	gcaagtgtca	agtgagaatc	aagaaaactca	taacatgggt	120
aacttgcata	ctgcaggcga	agataaattgt	gatctctcac	aggcagatcc	actcgagatc	180
ccagagggtg	atttttagaaa	actggaactg	catcttggtt	tctcgtcttt	ttggtctaca	240
cttctggacg	ttcctccttg	tggctttggg	agagaggcaa	tgtgtctatc	tgatgcttac	300
tgccttccat	ttccatcaag	ccggtctcct	aaacgccttc			340

<210> 277

<211> 351

<212> DNA

<213> Eucalyptus grandis

<400> 277

cgacgacccg	cataccgct	gccaatctgg	aggacctatt	tgacaacccat	aacatggctc	60
gaatacggga	cgtatgggcc	ccgaatcttg	agatagagat	gcagaacatc	cgcgaggcca	120
tcgagaaata	ctcgtatgtt	tcaatggaca	ccgagttcct	gagtggggcg	cgggccatag	180
gtaacttcaa	aacgtcctcg	gactaccact	accagacgat	gcgctgtaac	gtcgaccttc	240
tcaagatcat	ccaagtcggg	atcacgctgg	cagacgagga	gggggttggtc	ccgcaggact	300
gctctacgtg	gcaagttcaa	ctttaaaattt	agtctttggc	gacgacatgt	c	351

<210> 278

<211> 337

<212> DNA

<213> Eucalyptus grandis

<400> 278

gcagccgagt	cgagcaagaa	actaacgaac	gcccgggtgtc	attaggattc	ataatccaca	60
agaacaaaag	aaaaaaaggat	catgggaaga	tccccatgtt	gcgaaggcaa	tggcctgaag	120
aaagggccct	ggtcttctga	ggaagacaag	aagctccttg	attttatcca	gcagcacggc	180
catgggagct	ggatctctct	ccctaaacgt	gcaggctctta	atagatgtgg	caagagctgc	240
agattgagat	ggataaaacta	cttgtggccg	gacatcaaga	gagggagttt	ctccccggaa	300
gaagaacaaa	ccatcttgca	tctccactcc	gtgctcg			337

<210> 279

<211> 383

<212> DNA

<213> Eucalyptus grandis

<400> 279

ctccaacgcg	cgcttcttct	tcttggtactc	ctctgagctc	tctccatctc	ctccggctcg	60
gcgcggccgt	cgctcgacgg	gcagcactcg	agggtttcca	tataattcac	ttgaaaagaag	120
ctgcagaatg	ccgtggaaaa	caggacttac	cggctctaaa	acggaagaag	ataaggctct	180
gcagctttgt	cgggagagaa	aaaaatctgt	taggcaagct	gttgatgggt	ggggctccct	240
tgtgtatgca	catttcatgt	ttgtgcaatc	attaaggaac	gtagggacag	ctctcacaaa	300
gttctttgaa	acagaatctc	caaatgggtc	tccctcgtat	gcctcaatga	gtacaacacc	360
tgagccaatc	gcattaaccg	aga				383

<210> 280

<211> 312

<212> DNA

<213> Eucalyptus grandis

<400> 280

ggtttgctca	gatgcagcaa	gagctgcagg	ctcagatgga	ctaattacct	ccgtcccggg	60
atcaagcgcg	gtagcttcac	ggaccaagag	gaaaagatga	tcgtccacct	tcaggctcct	120
cttggttaata	ggggggcggc	catagcttcg	taccttcctc	agaggactga	caatgatatc	180
aagaactact	ggaataccca	tttgaagaag	aagctgaaga	agcttcaagg	ccaagcaaat	240
cctgatgatg	atgaccataa	tcatacccca	caagggttca	acgcaacttc	acactccaac	300
cccaagggcc	ag					312

<210> 281

<211> 311

<212> DNA

<213> Eucalyptus grandis

<400> 281

gagatggcga	ggacaccatg	ctgtgagaag	atggggatga	agaaagggcc	gtggactcca	60
gaggaagacc	agatcctgat	ctcccacatc	caccagtttg	gtcactcaaa	ctggcggtga	120
cttcctagac	aagcaggtct	gttaagatgt	gggaagagtt	gcagactccg	gtggataaac	180
tacttgcgac	ccgacgtgaa	gcgaggggaa	ttcaccgacg	acgaaagaga	caccatcatt	240
gaacttcatt	aagtctcttg	caacagatgg	tcggccatag	cctcgagatt	gccggggcga	300
acggacaatg	a					311

<210> 282

<211> 378

<212> DNA

<213> Eucalyptus grandis

<400> 282

catggacagc	tgaagaggac	aagaagctca	tcaacttcat	cctcaccat	ggccaatgct	60
gttggcgggc	tggtcccaag	cttgctggac	tgctgcggtg	tggaaagagt	tgagggtga	120
ggtggacca	ttacctgagg	ccagacttga	agagaggcct	tttgtccgag	tatgaagaga	180
aaatgggtcat	tgacctccat	gcgcaacttg	gcaacagatg	gtcgaaaata	gcctctcacc	240
tcccgggaag	aacagacaat	gagatcaaga	atcactggaa	cactcacatc	aagaagaagc	300
tcaagaagat	gggcattgat	cctctcactc	acaagccatt	agtcaccaac	aacgacaaca	360
caaccgatca	acaacccc					378

<210> 283

<211> 389

<212> DNA

<213> Eucalyptus grandis

<400> 283

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cgacgacagt	ggtaagtccc	aagatgtcga	ggtgagaaaa	gggccgtgga	cgatggaaga	120
ggatctcatc	ctcatcaact	acatagcgaa	tcacggcgaa	ggcagttgga	actccctagc	180
caaagctgct	ggtctaaaa	gtaccgggaa	gagttgtcgg	ctccggtggc	tgaactatct	240
gcgacccgac	gtccggagag	gcaacatcac	tactgaggag	cagctcctga	tcatggaact	300
gcatgccaa	tggggaaaca	ggtgagatgc	acataagtca	cacaactttt	cgttacatag	360
gttctacaac	ataataccca	tcgatcata				389

<210> 284

<211> 385

<212> DNA

<213> Eucalyptus grandis

<400> 284
 ccaatggtga cagtgttaag gatgaccttg atacagatga atatgaaact catgccacag 60
 ttttggataa gctattagca tgggagaaaa agctctacga agaagtgaag caaggtgagc 120
 acatgaagct agagtatcag aaaaagggtg ctttgctaaa caagcagaag aaacgtggtg 180
 ctagtgggtga atccctggag aaaacaaaag cagctgtaag tcatttgcac acgacataca 240
 tagttgacat gcagtcctat gattcaactg cttcagaaat aaaccacata agggacaaac 300
 agctgtaccc aaagcttgcg caacttgctg atgggatggc gaatatgtgg gaaaaaatgc 360
 gcatgcatca tgataagcag gagtc 385

<210> 285
 <211> 461
 <212> DNA
 <213> Eucalyptus grandis

<400> 285
 caccggaac agtccatggt cagaattatt ctccaattca tcaaattgggc attgatggat 60
 tctttccagc gcatccctcc ccacagaatc cttcgtacca ttcttactcc cccaacaata 120
 gacccaattt cctctctcgg tccccctcaa cttcacagtg ggactatttt tggaaccctt 180
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 aagaaactga gcacgaagaa tgtgatcacc actcgtatgt tgatgaagat agaggcaaca 360
 gagatgctaa tttccccact gaggaagttt tagtggaaga tggtgatgac gaggaagagg 420
 atgaggatga aggaaacaga cacagctgtg aatctgagga t 461

<210> 286
 <211> 438
 <212> DNA
 <213> Eucalyptus grandis

<400> 286
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 atgaacccat ggcagctgcc ctgcccgatg cagccaatta cggcgtctgc cgacatgttg 180
 cagctgtgag catcagattg gaagtgtaaa agttggggct gattcttttg gagtccctt 240
 ctggggggat ggtagatcca tagccatttg ctgcttttgt ttttcttgtc aattccgttc 300
 tctttcttga agttggaact ccaatatctg tatgcgtctg tctagatgga ctggcgcttt 360
 tatgtctgct tgacattgta cttggctgtt cttgcttggt acttatggga tgttcctggt 420
 ctaaaaaaaa aaaaaaaa 438

<210> 287
 <211> 405
 <212> DNA
 <213> Eucalyptus grandis

<400> 287
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 ctgatccaag ctgaagatcg tgctcacagg attggtcagg tatcttcagt taatatatat 120
 tacctgctgg caaatgacac tggtgatgac ataatatggg atgttggtcca gagcaagttg 180
 gaaaatttgg gtcaggtgct tgatggccat gaaaatacat tggaagtctc agccagccaa 240
 ccaactagaa acagccctgc aaagcaaaaa acctttaata gccctggcaa acagcataca 300
 tttaatagcc ctgggaagca gcaaaaattt aatagccctg gcaagcagac aacactcgac 360
 tcgttcatga agcgttgcaa tagtggtgac ccctctgaac atcag 405

<210> 288
 <211> 515
 <212> DNA
 <213> Eucalyptus grandis

<400> 288
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 acgcgcagag cgacccaaga gtgtttcaga acagtccgtc catggccttg gaagctatca 120
 actctccac cgcgccctca gcgcctgtcc agttcatgga ggagcccttg agtcccgt 180
 tcttgagacc cctgaacaag cgcaagcgct ccaagcgccc ccaccaccct ccctccgaag 240
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 aagaagccgc ggcgaccgcc acggcaaccg cggccccggc gaataacttg agctacaagt 420
 gcgcctgttg cggcaagggc ttccctcct accaggccct cggcgccac aaggccagcc 480
 accgcaagtc ggccgcgcc gccgcgccg ccgcc 515

<210> 289
 <211> 375
 <212> DNA
 <213> Eucalyptus grandis

<400> 289
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 ctggctctca ccttcggcag gttcatcgac aagtttcct gaaattaaag gaacccttgt 120
 catatgtcct gtggttgctg tgactcaatg gggttggtgag attaatgtct cactgcccc 180
 aggaagcact aaggtcctag tatatcatgg agcaaataga ggaaagactg ctgatcagtt 240
 caagaacttt gatctgttg taaccacata ttcacttgtt gaaggcgagt acagaaaatt 300
 tgtgatgcca cccaagaaga agtgcattha ttgtgggaag ttgctttaca aggagaaaat 360
 gacagttcac cttag 375

<210> 290
 <211> 590
 <212> DNA
 <213> Eucalyptus grandis

<400> 290
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 gttcgacgaa ttatcgctg atgccgcggg cttctcgac gccagcgatg tcgatgcttc 120
 gtctccggga tcgctgtcct cgtggatcgg cgagatcgag ggcatgctga tgaaggacga 180
 cgaggaagcc gtcgccgtcg agccgagtca ggaggtcttc gatcgcttct tcgccggctt 240
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 cgagataac gagctttccg aggacgctga tgatgatgat cccgtctcta agaaacagag 420
 aaggcagctc aggaataagg atgcggcggc taggtcgagg gagaggaaga gaagttacgt 480
 gaaagagctg gagatgaaga gcaaataat ggaaggggaa tgccgcaggc tggggcggtt 540
 gctccagtgc tttgtggctg agaatcaagc tctgcgtctg aatttggaga 590

<210> 291
 <211> 307
 <212> DNA
 <213> Eucalyptus grandis

<400> 291
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 aacaaatatt tggaggctct taacaataaa ttcacagttg gaatgagatt caagatgaga 180
 tttgaggggtg aggattctcc agagagaagg ttttctggta caattgttg ggtggaagat 240
 ttctcacctc aatgggataa ttcaagttgg cgatcattga aggttactg ggacgaacat 300
 gcgtcat 307

<210> 292

<211> 209
<212> DNA
<213> Eucalyptus grandis

<400> 292
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gctcttgact gcacacaagc tgtgtggcaa taaatgggccc atgatcgctc ggctcttccc 120
cggccggacg gacaacgccg taaagaacca ctggcacgtg atcgtcgcga ggaagcagag 180
agagcagtc cacaacgccc gcggccgga 209

<210> 293
<211> 224
<212> DNA
<213> Eucalyptus grandis

<400> 293
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ttgataattgt ggcagaggaa tcggttgatg tgccaatggg atcaaggagac ttctttgcgg 120
tcgacgagca acagcaggaa acagaagtaa atgatgcctt gcagcagctg ccacctgatg 180
ttgatgaaga atgtgaatct atggactcca ccaactcaaa tact 224

<210> 294
<211> 185
<212> DNA
<213> Eucalyptus grandis

<400> 294
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gatgtctggg gaaatcccct gtgctagtat tgacagccca tctgttagga ctacatctgg 120
acctctgggt ccttttgata aacatgtgca ctcgcttccc tatgttgatc ccagacagcc 180
agttc 185

<210> 295
<211> 428
<212> DNA
<213> Eucalyptus grandis

<400> 295
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gccacatgag gcggcacagg tccgccccgc cgcgcagcgc caccagcgcc gacgcgacga 180
gccccaccaa cccgcccggct gctgcccga taccaccga gaagtccgc aacatcctct 240
ccttggaact gaacctgccg gccccgaacg gaggaggatc accaccacca agcgcaccgc 300
cgccgggaga actcgaagtt ccaattcgcc acaagtcaac agcccatcat actagcctcg 360
cccgccttgg tggattgcca ctactgaaaa aaaaagaaaa gacgggttca catgtcaatc 420
aatgtaac 428

<210> 296
<211> 418
<212> DNA
<213> Eucalyptus grandis

<400> 296
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cttttaagtg cacttgaagc agtagagctt tcagatacag ggacttcctt cacgttcaag 180
atggattcat ctatgcaaag gaaaccacca gtagatgaaa gcccaaggat gcatccgttg 240

cccatgaatc	taactactga	agaggggagat	aacaatgttt	cgtgccaaact	aaatctatct	300
cttgcacatt	ctctactgca	agttgaccac	agtcaacaat	tcaatcgttt	gaatgtgcta	360
ggttcagaaa	ctagcaagtc	tccagatgca	aggtcaaatg	ccagcatcac	agaatctg	418

<210> 297

<211> 250

<212> DNA

<213> Eucalyptus grandis

<400> 297

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tgttgagaaa	ggacgactta	gggttgaatc	ttatgcctcc	ttcgacttgt	taaggttctt	120
ggcgtatgatt	atgatatgat	gatcagtttt	tcctgcatta	tttgaagaag	ctgaggctga	180
ggtttcttgt	cttttctttt	tccttttttg	tatttttgaa	gaggttttct	tttctctatt	240
tccccccca						250

<210> 298

<211> 626

<212> DNA

<213> Eucalyptus grandis

<400> 298

agaacatagg	tgcgaaggcc	gatgtgttcc	acatactctc	tggcatgtgg	aagacgcccg	60
ccgagaggtg	tttcatgtgg	ttgggcggtt	tccgttcac	tgaacttctc	aagatactag	120
ggaaccacct	ggagcctttg	acggatcaac	agttgatggg	catatgtaat	ctgcagcaat	180
cttcacaaca	ggctgaagat	gctttatctc	agggaaatgga	agctctgcag	caatctctcg	240
tggacacact	ttcttcgacc	acactgagtc	ctactgggtc	aggcaacgtc	gcagaataca	300
tgggccaaat	ggctattgcy	atgggaaagt	tggccactct	cgaaaacttc	gttcaccagg	360
ctgacctctt	gagacagcag	acgctccaac	agatgcacgc	gatattaacc	acccgccaag	420
cagcccgccg	tcttctcgtc	atcaatgact	acatctcacg	tctccgagct	ctaagttcat	480
tatgggttag	tcgtcctagg	actgaaaaca	tctgttctgc	taaactcttc	tgatgtaatc	540
gatagttttg	attgaaatta	acgtttctag	tggggatcca	tttactgcga	ctgtagcgat	600
tcggggccca	tttatataaa	agctat				626

<210> 299

<211> 438

<212> DNA

<213> Eucalyptus grandis

<400> 299

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tgcggatcgc	aacacatcat	ttactaacct	tagtgctgcc	tggtagagtt	tggtctgagt	180
agcggcagcg	gccttatact	tagtgatttc	gacagaagcg	attggctgga	gattgatcaa	240
ctttcctgct	tcaccattat	ttgttactgt	acagcgcgcg	acagatagca	acatctaaca	300
gtaaagatgc	aatttttttt	tcccctgaaa	atgtaaatga	tatagggttt	ttgttctatc	360
tctgtgctct	cctccattcc	ttatttgtat	acggagatca	caaacttgag	gtcagtgaat	420
ttgataatta	tgtcttgc					438

<210> 300

<211> 345

<212> DNA

<213> Eucalyptus grandis

<400> 300

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cggagggttc	ctgattcaga	ggcgccggcg	ggcagcgacg	acgaggagga	gctccgacct	120

cgaagcgctt	cggtccgatt	cctcccttgc	ggtcgcgcgt	gtctgacgga	cgagtcgttt	180
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gggtcgaggg	ccgagctgat	gcggagatgg	cgctctacaa	cgagctctgg	caagcctgcg	300
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<210> 301
 <211> 454
 <212> DNA
 <213> Eucalyptus grandis

<400> 301						
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ggtagacccc	aaccaaattc	gccaccgcca	ccgccaccag	ccccagcgat	ccaaatccct	120
gaccaaccac	cgcataattc	gccttcttct	tcttcttctt	cttcttcttc	ttcttcttca	180
ttggccacca	ccggtgatcg	gggcgggttc	tcgcctagac	cgatgctttc	tccgagcggg	240
tcgtcgccgc	tggctcaatc	cacagggagg	caccgcgttt	accgtggagt	ccggtcccgc	300
agcgggaagt	gggtctccga	gatccgcgag	ccccgcaaga	ccaccgcgat	ttggcttggg	360
acatacccga	atcccagat	ggccgccgcc	gcctttgacg	tggccgcgct	ggctctgaaa	420
ggctccgacg	ccgccctgaa	cttcccccat	gatg			454

<210> 302
 <211> 286
 <212> DNA
 <213> Eucalyptus grandis

<400> 302						
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gattccgctc	ttcaacctca	cttccaaaat	tctttgccag	gtcgtgaacg	tccagctcct	120
ggcggagcaa	gaaacggatg	aggtttatgc	acagattact	ctaattccag	cgggaaatct	180
aatggagcct	acaagtccc	atccagtctc	tgcggaaact	ccaagaacaa	gagttcatag	240
tttctgcaag	gttctaactg	cctctgatac	cagcacacac	ggtggc		286

<210> 303
 <211> 513
 <212> DNA
 <213> Eucalyptus grandis

<400> 303						
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ggcaaccgtc	ggtgtacacg	ctgacctttg	aggagtcca	gaactctata	ggcaaggact	420
ttgggtccat	gaacatggat	gagctcataa	agaacatttg	gtctgcagag	gagaaccaat	480
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<210> 304
 <211> 370
 <212> DNA
 <213> Eucalyptus grandis

<400> 304						
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tgccgcaatc	ttcattccta	tcaattgagc	acttcaacag	gctttttcta	gtgggaagaa	120
gtctccaaca	aacatgacat	aggggatatt	ctggaaatag	ttatgaaaga	ggagaccccg	180

tttctaataa	ggaacttcca	tgcaggcatg	tggatcgtac	gaatattctg	agcaatacca	240
tgatgaagtt	aagccagcat	atggacctca	gatatcggca	cattctcagt	atctcgggta	300
caattccttg	agattggggg	tgcctctcag	agtggcggag	gaacctgttt	atgtgaatgc	360
caagcagtac						370

<210> 305
 <211> 503
 <212> DNA
 <213> Eucalyptus grandis

<400> 305						
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catgtccttg	acccgctctt	tctcggcg	agacgggtatt	cccgggaagg	ccctcagcac	120
ggggctccttg	gtctggctga	ccggtgctcg	cgagcttgag	tcgtacaagt	gcgaccgggc	180
caaggaggcc	gagctccatg	gcacccgcac	catgggttgc	atcccgaactg	gtgatggagt	240
ccttgaattg	gggtccttg	atgtgatccc	tgaaaaactgg	ggccttggtc	aacgagccaa	300
gtctcttttc	ggctccgata	tgctccttcc	caagcaccgc	ccaccgccac	cacctccgtt	360
ccagctccac	catgaccata	gcgacatttc	tttcgctgac	attggaataa	ttgcgggcgt	420
tcaagagaat	gatttcgctc	ctcacgatga	ccacgagaag	aagggtcaaga	agaagcagcc	480
gctggtggaa	ggagctggcg	gga				503

<210> 306
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 306						
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tcgagtttg	caaccgggaa	aagatcaccg	agtatctcta	cccgtgttt	gtgcatgaca	180
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cgcagaacac	gcttgccgcc	atcgatcgtc	gcaggaacga	ggcgcgcagt	gcggcaagca	300
tccaggggca	ggcggtgagc	ggagtattgg	tctctcccgt	cgcccagacc	gcaggcggcc	360
gacccagcgt	cgaccgc					377

<210> 307
 <211> 361
 <212> DNA
 <213> Eucalyptus grandis

<400> 307						
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gaacagttaa	ttttccgagc	ggcattgcag	gatctctctc	agccaaaatc	agaagaaact	120
ccacctgacg	gtgctctggc	agtacctctt	ttgaggcatc	agaaaattgc	cttgtcatgg	180
atgggtgaaaa	aggaaaccgc	cataaattgc	tgtgggggaa	ttcttgcgga	tgatcaggga	240
ctagggaaga	cagtatcaac	tattgctctt	atacttaagg	aaagacctcc	aaccttcaaa	300
caatgtcagg	agaatccaaa	gcaggagtta	caaacttttg	atttggtatga	ggatgaaaat	360
g						361

<210> 308
 <211> 357
 <212> DNA
 <213> Eucalyptus grandis

<400> 308						
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gtggacagag	ggtgttcccc	catagatcca	tcactcgctc	gtgttacttc	ggcgaaaaaa	120

aggctttgtt	ttgggacctg	ggtttgtgtc	gatttggctgt	ttttgtgaac	tcccgaatag	180
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tcgacgagga	attcgcgcga	atccgcgaga	tcgtcgacga	ttatccgtac	gtggccatgg	300
acaccgagtt	cccgggtatc	gtcgtgcgcc	ctgtgggcaa	cttcaagaac	tccagtgt	357

<210> 309
 <211> 433
 <212> DNA
 <213> Eucalyptus grandis

<400> 309						
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aagtctcccc	gacctctct	cgccattccc	ggcctcgccg	tccggctgaa	ttgtcgacgt	120
tccggctcgc	tccggcgccg	actggaggcc	atggcggtat	cggacaacga	ctcggggggc	180
cacaacaacg	cgaacagcga	gtcggcgccg	gcgctcgccc	gcgagcagga	ccggttcctc	240
ccgatcgcca	acgtcagccg	gatcatgaag	aaggcgctcc	ccgccaacgc	caagatatcc	300
aaggaggcca	aggagaccgt	gcaggagtgc	gtgtcggagt	tcataagctt	cataacgggg	360
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<210> 310
 <211> 511
 <212> DNA
 <213> Eucalyptus grandis

<400> 310						
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agggccagga	agtgttgaag	accagatccc	ttaaactaag	agaagagcgg	aagagctttc	240
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agaagagcca	gaagagagat	ttagagactt	gtgaatcaag	caagaagagc	aaattgcttg	420
gttccgatgc	tgaagccacc	aaattcttga	atgaagcaat	ggatcacatg	attaaaagcc	480
caaacgttga	ttgcctgaga	atcagtgatg	a			511

<210> 311
 <211> 799
 <212> DNA
 <213> Eucalyptus grandis

<400> 311						
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gccactcaat	ctggacttct	acctccaatg	ctttcttcca	ctggtttaca	caataacctt	600
ggcatcgacg	acccctccaa	attgctaagt	ttccaagccc	ccaccaagg	tcttcaattt	660
aataaaaacga	atccacaaaa	tcaagtcagt	caattgctgc	aaccgtctat	ggcttgggtc	720
caacagcacc	agcttcagca	actgttgacg	aatcctctgg	gccaccagca	gcagcagcag	780
cagcagcagc	tgacgcgcc					799

<210> 312
 <211> 304
 <212> DNA
 <213> Eucalyptus grandis

<400> 312
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 tacgatggta tcgaaactca aagtcacatcg ctatctgaag tgaggaggca tcatcctgat 180
 gattcagggtg gttctgaagc tgctgccacc agaaatggca tcacaaaccc atccgtgaat 240
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 caag 304

<210> 313
 <211> 427
 <212> DNA
 <213> Eucalyptus grandis

<400> 313
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 ggcggaggcg gaggcgcccc ggcgccgttc ctctgaaga cctacgagat ggtggacgac 180
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 ttcattccggc agctcaacac ctacggattc cgaaaaattg atcctgagcg atgggagttt 360
 gctaattgaag aattttgtgaa ggacaaaaaa catcttctca aaaacatcca ccgtagaaag 420
 cccatcc 427

<210> 314
 <211> 308
 <212> DNA
 <213> Eucalyptus grandis

<400> 314
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 agcagaatgt acgtgttgga ggggtgtaact ccttgcatatc aatctatgca gttacaagct 120
 ggagacactg taacttttag ccgcatggac cctgaagcga aacttataat gggtttccgg 180
 aaagcatcaa cctctatgat gcaggacagc caactagctg ctgtttctaa cggttaaccat 240
 tcaagtgaag ctttgatttc tgggtggttt gaaaatgtac ctatgataag tgggtattcg 300
 agtctcct 308

<210> 315
 <211> 92
 <212> DNA
 <213> Eucalyptus grandis

<400> 315
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 ttagttcacg agtcgaagac tatgagcagt gc 92

<210> 316
 <211> 764
 <212> DNA
 <213> Eucalyptus grandis

<400> 316
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gctcgtctgc	tcccgtgtt	cccttcccct	ccccgtctcc	tgagtagggg	tcggaagtt	300
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gctgtttgct	caagtgactt	tgcttccggg	gcctaaccac	gatgagactg	ctgtggagaa	720
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<210> 317

<211> 181

<212> DNA

<213> Eucalyptus grandis

<400> 317

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caggggctag	aacagctcca	acagtcactc	gtcgacacca	ttgccggcgg	gccagcatc	120
gaaggaatgc	aacagatggc	aatcgccttg	ggcaaattaa	ccaatctcga	aggctttgtt	180
c						181

<210> 318

<211> 420

<212> DNA

<213> Eucalyptus grandis

<400> 318

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tttcagcctt	accaccata	caaagagatt	cgggtgtgca	tgtaagcaa	acaacaagtg	180
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acaaagatcc	tgctgaagtc	agacgcgcca	gaaggatgca	gtcaaactcg	gagtcagcta	300
ggcgatccag	aagaagaaaa	caggagcaca	tgagtgaact	tgaaaaccag	gttgagcaca	360
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<210> 319

<211> 462

<212> DNA

<213> Eucalyptus grandis

<400> 319

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tgaggaggag	gatcacgtca	tctgcactct	tttctttacc	ataggaagca	ggtggtcggg	180
aattgcttcc	aaattgccag	gaaggacaga	taatgatgtg	aagaactact	ggaacaccaa	240
gctgaagaag	aagctaatag	agcaactggc	ttctctgaaa	acagtgcctg	aaagtaactt	300
tgactatcag	gtctgcgcac	agaactcggc	ctcaatcgat	cctgagacca	agaatcggga	360
atatgctgct	aattcaatgg	gattccccaa	gcagaacttc	aatccaggaa	taccacttcc	420
gaactcgagt	cttctctgtc	ctccaagtct	cactgaagtt	tc		462

<210> 320

<211> 445

<212> DNA

<213> Eucalyptus grandis

<400> 320
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gaccgcagca gcgatatcgc ggcgtgcgcc agaggcattg gggctcctgg gtctctgaaa 180
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tcccttaciaa cccaaacatg tctcagtcct ttcgtcgaag ctctctctcg cgacattgac 360
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gcaagaacca cagaaccacc cagtt 445

<210> 321

<211> 350

<212> DNA

<213> Eucalyptus grandis

<400> 321
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ggaggcgagg gagctcccca agaccatcgt gcggcgcggt gtgaaggaga agctctcccg 180
gtgctccgac gacggcgacg tctccctcca caaggacgcc ctctctgcct tctccgagag 240
cgcccgcatc ttcattccact acctctccgc cacagcgaac gacatatgca aagaatcgaa 300
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<210> 322

<211> 263

<212> DNA

<213> Eucalyptus grandis

<400> 322
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gctgggtggg ggatgcagct agattcaatg gatgacgatg aggacctgac tgttgagat 180
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<210> 323

<211> 893

<212> DNA

<213> Eucalyptus grandis

<400> 323
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tcacagagat attccagctt ggcgtctttg cttttgcacg ggtctccac tgtcagggat 840
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<210> 324
 <211> 434
 <212> DNA
 <213> Eucalyptus grandis

<400> 324
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 ggccacatga atgtccaccg cagagaccgt gctaagcttc accaatcaca attccggccg 360
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 ttcccgaatc aaga 434

<210> 325
 <211> 588
 <212> DNA
 <213> Eucalyptus grandis

<400> 325
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 aagctcttcg gcttcaacgt ctccgatgag gaagactcag ccgtcagcga cccattact 180
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 cagcagctca agcgcgcca gctgcacgcc agccggaacg ccgccgtgtc gtcgctcgtc 420
 cggaacccca tcatctcggc ctctcgctacg ccgcccgcacc tgctggccac cgtggggccg 480
 gtggtggtga cggggggcgg gcccacctcc ccgtcctggg ttacggttc gcgtggcgcc 540
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<210> 326
 <211> 417
 <212> DNA
 <213> Eucalyptus grandis

<400> 326
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 tctctttgca gttcctgcaa aagacaacaa gctttactca tgcaacttct gccaaaagaa 180
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 tcaccatgta cggccatctt ttcaatctgt ggtttatgag aatcagccac gcttggccag 360
 gcatgttggg gatgatatga ggtatgctgg gactaatccg ctgtatgggt catcttg 417

<210> 327
 <211> 448
 <212> DNA
 <213> Eucalyptus grandis

<400> 327
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 cggatcaagg gcagggttcg gaagcgcgcc gacatcgagg cggaggccga gcgcatgttc 180
 ggggttcgggg tcgtgccctc cttctgatgt catctgaagc gttggaagg ctctctctct 240

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ctcttgcagc	gatatcagtc	tgttttgtat	atacagtagg	agactgttgt	gtgctccctg	360
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<210> 328
 <211> 673
 <212> DNA
 <213> Eucalyptus grandis

<400> 328						
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ccggctgcgg	tggctgaatt	acctccgccc	cgacgttcgg	cgcggaaca	taaccctcga	180
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gcaacacttg	ccgggcagga	ccgacaacga	gatcaagaac	tactggcgaa	cccgggtgca	300
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cgctactgtc	gccgccgccc	ccatggcagc	cccaccaca	atggccacca	ccgcagcatc	480
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cgggcgagtg	aatgtggcgc	ccagctacag	caccccgag	aactcctgca	cgacggcgct	600
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<210> 329
 <211> 1008
 <212> DNA
 <213> Eucalyptus grandis

<400> 329						
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cgcgaccgac	ctctccgcct	tctggccgcc	gccggccacc	ccccctccgc	cggcgccggc	240
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<210> 330
 <211> 384
 <212> DNA
 <213> Eucalyptus grandis

<400> 330						
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aacctctttg	ctgtcttcca	tggttccgcc	attcccagct	gcagaactgc	ctctcaacga	120
gaatgattcg	caagacatgg	tcattctacca	tgtactgaac	gaggccatgt	cccagaacaa	180

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cgcggtgaga	ttcgcgactc	gttacgccac	ggggcccag	tttggctcgg	gacattcgag	360
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<210> 331
 <211> 420
 <212> DNA
 <213> Eucalyptus grandis

<400> 331						
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agtcacgag	ggagattca	gatgatgaag	aatttgaagg	tgacacggga	accactgaaa	240
acaaagatcc	tgctgaagtc	agacgcgcca	gaaggatgca	gtcaaaccg	gagtcagcta	300
ggcgatccag	aagaagaaaa	caggagcaca	tgagtgaact	tgaaaaccag	gttgagcaca	360
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<210> 332
 <211> 1439
 <212> DNA
 <213> Pinus radiata

<400> 332						
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tttgtttgaa	ttaagctgtc	atcgggcagg	gcaagcaggt	cttcatact	ctgcaatata	120
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aaaagtcaag	gcccggttt	ctgaagtga	aggtgtcatg	atggacaaca	ttgaaaagg	900
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<210> 333
 <211> 407
 <212> DNA
 <213> Pinus radiata

<400> 333						
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agaaatcgga	tcaaggacta	ggacttatgg	actaccaaca	acaacagctg	ttgtgtgaaa	360
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<210> 334
 <211> 307
 <212> DNA
 <213> Pinus radiata

<400> 334						
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tcagatggaa	tatgggcggg	ggtggacgtc	tctcttgaca	cgttgcgtag	gaaccgcgaa	120
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atccaggaga	tgcccaatgg	ctattccaag	gttacgtggg	ttgaacatgt	tgaagtggac	240
gagagggctg	tgcaccgtat	ttatgataag	ttggtaagca	ccgtttcgcg	ccgaacgccca	300
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<210> 335
 <211> 530
 <212> DNA
 <213> Pinus radiata

<400> 335						
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gagtctgtgg	tgactagtgg	tcagcaccaa	cataatccaa	cacctcagca	tcccccaaga	300
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aaggctaaag	gagctgctgt	cgattgggtc	cagatgcctg	ggatgaagcc	tggtccggat	420
tcgattggta	ttgtagctat	ttcaaatact	tgtaatggag	tagctgcacg	tgcttgcggg	480
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<210> 336
 <211> 402
 <212> DNA
 <213> Pinus radiata

<400> 336						
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accattctcg	agttttggga	ttgtatatta	tcagtttgaa	agtgtgagtg	caatttgata	360
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<210> 337
 <211> 356
 <212> DNA
 <213> Pinus radiata

<400> 337						
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<210> 338
 <211> 380
 <212> DNA
 <213> Pinus radiata

<400> 338						
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aaagcatttg	aacttgctgt	tctctgtgat	gctgaagttg	ctctgataat	cttctctgaa	120
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gatcaattac	aaagtcaggat	gttgcaggag	aagatagaca	atttgagaga	aacgaaaaag	300
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<210> 339
 <211> 299
 <212> DNA
 <213> Pinus radiata

<400> 339						
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<210> 340
 <211> 584
 <212> DNA
 <213> Pinus radiata

<400> 340						
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<210> 341
 <211> 592
 <212> DNA
 <213> Pinus radiata

<400> 341						
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gtccctcatt	tacagctttg	ttgcaagggg	cacgggtggtc	ttggccgagt	acacccaatt	180
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atactgtgtt	gttgacagatg	aatcagttgg	aagacaacta	ccaattgcct	ttctggagcg	360
cattaaggat	gacttcaaga	aacgatatgg	tgggtggaaaa	gctgacacag	ctgttgctca	420
cagcctcaac	aaagactttg	gaccaaaatt	gaaagatcat	atgcagtatt	gtgttgatca	480
cccagaagag	attaacaaac	ttgcaaaaagt	gaaggctcag	gtttctgaag	ttaaaggcgt	540
aatgatggag	aatattgaga	aggtccttga	tcggggtgaa	aagatagaac	tt	592

<210> 342
 <211> 163
 <212> DNA
 <213> Pinus radiata

<400> 342						
gtttcctact	ggaaatgggtg	gaacaatcga	gctttttatac	atgcatacat	atgcggccac	60
tacttttagct	tctgctagag	acttctggac	tctgagatac	acaacagtgt	tggaatatgg	120
tagtcttggtg	gtttgtgaaa	ggtccttgag	tgggactcag	ggt		163

<210> 343
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 343						
gaggagggag	gcctgtgcc	ctcagccgtc	cttaatggcg	agagctcctc	accaccacca	60
gcaacagcaa	caccaccagc	accaccaaca	agaagccagc	aggatgggtga	cttccttgga	120
ggtcgatata	gatactgctt	gttccagtaa	acctaacgat	tccattgatg	cgctgaaatc	180
aaaaattgct	tgccatcctc	actatcctca	gctgttgcca	gcttacatgg	attgccagaa	240
ggttggggct	cctccagaag	ttgtcacagt	actggatgag	attattcaag	agaatcagct	300
tggacgccat	tcgggaacta	tggatatagg	agtggatccg	gagcttgatc	aattcatgga	360
ggcctactgc	ca					372

<210> 344
 <211> 418
 <212> DNA
 <213> Pinus radiata

<400> 344						
gtagattcct	tgtctatcaa	gaggggtgcac	aagggtttgtt	tttaagaaca	cagacaggca	60
gacagacaga	gacgtgatca	tggggcgagg	gaagattgaa	ataaaagaaaa	tagatgatgt	120
aacgagcaga	caggtaactt	tctcaaagcg	caagatgggg	atattcaaga	aagcccacga	180
gctgtctgtt	ttatgcatg	cagaggtggc	tgttctcatc	ttttcaaaca	ccggaaggct	240
ctacgactat	gctagttcaa	ggtgtatgga	acgaactatt	gagagatatg	aaaaatgtac	300
caaagcaatt	aattgccccaa	catcagatcc	cattgtcgag	aataagagcc	caattcagga	360
aggcattgaa	atattgaggc	agaaaacttcg	tgcattacaa	agattgcaaa	gaaatctg	418

<210> 345
 <211> 657
 <212> DNA
 <213> Pinus radiata

<400> 345						
ggtacaagaa	gtggctcata	ttgcaaatgg	gtcgcacccg	ggaaattgta	tttctcttct	60
tcgcgtaaat	gcatgtagta	caagccaaaa	cgtagagcta	atactgcagg	agagttgcac	120
agatgcatct	gggtctgtta	tagtgtacgc	ccccgtggac	gtcccagcaa	tcaatattgc	180
tatgagcggg	gaggatcctt	catacatagc	ccttctcccc	tctggatttg	ccattcttcc	240

agacgggtcaa	aatagatctt	ctactagttc	actcctcgaa	ggggcgaaca	gcagcagcaa	300
cagtagcaac	agcagtggat	tggatagccc	gctcacaaga	ggagggttcat	tactcactgt	360
ggccttttcag	gtgcttgtca	gccattttacc	aacagccaag	ctgggttttag	attctgtttac	420
aaccatcaat	aatctcatat	gcaatacagt	gcagcagata	aaatctgcat	tgcactgtgc	480
agatgtctga	atcgacagtgt	aattatcgga	gtacgggtgg	agggggcggc	atgcagagaa	540
acaacataaa	aaacgttcta	tccggtactt	gcacccccaa	gggtagtaga	ataaaaaatg	600
atatgcatat	atatgttttg	tggttgcttt	ctgtagtttt	atctgctgca	gttaagt	657

<210> 346

<211> 377

<212> DNA

<213> Pinus radiata

<400> 346

aaccggagag	caagaacaaa	gtggaaacgc	aacgaagtgg	agtgcgataa	tctgaaacgg	60
tgttgcgaga	gtctgaggga	ggagaacaga	agattggaga	aagaagtgca	gtcgctgaga	120
gccatgaaaag	tcccgcagtc	acccaattcg	atgcctctgg	cagccgccac	cctcgcaatg	180
tgtccggcct	gcgagggcct	tgcaatcaag	aaccgcggcg	ccgccacttc	ctccaccgcg	240
aagtcacaac	aatccctcct	tacaattatg	gggattgggg	atgtaaatat	gatatccaaa	300
aataaccaa	ccccttcaat	gggaatggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaaa	aaaaaaa					377

<210> 347

<211> 558

<212> DNA

<213> Pinus radiata

<400> 347

gaaagaagga	agaatgggg	cgagggcgcg	tcgagctgaa	gcggatcgag	aataagatta	60
accgtcaggt	cacgttttcg	aaacgcggga	atggctctgct	gaaaaaggcg	tatgaacttt	120
cagtgttatg	tgatgcagag	gtagcacttg	ataatattct	caagcagagg	aaaactctat	180
gagttcggaa	cgccggggat	gctcaagact	ctggagcgat	atcaaaaaatg	ttcatacgta	240
ttgcaagacg	cgactgtatc	ggaccggggag	gcgcagaatt	ggcatcaaga	ggttggcaaa	300
ttaaaagcca	aagttgaact	tttacaacga	tcacaaaggc	acttattagg	tgaagacctg	360
ggcccccttga	gtattaagga	gctgcaacaa	ctggaacgtc	aacttgaggt	tgcactgaca	420
catgttaggt	caagaaagac	tcaagtcatt	ttggaaatga	tggatgaact	acgcagaaag	480
gagcgaattt	tacaagaagt	aaacaaatct	ctgcgcaaga	agttgcagga	ggccgagggga	540
caggcattca	atgccatg					558

<210> 348

<211> 331

<212> DNA

<213> Pinus radiata

<400> 348

ctcagataca	gctaatagca	gtgagcttct	gggcagcagc	agatcagatg	gagatcaccc	60
acatcatggc	caccatgatc	agcagcagca	gcagcaggag	aatcatatgg	tgtggcagaa	120
ttcaaggctc	aaggcagatg	ttctccaaca	tccactgtat	gaccagtgtg	tggctgctca	180
tggtgcctgc	ttgaggattg	caactcctgt	ggatcagctt	ccaaaaatag	atgctcagtt	240
ggctcagcag	caccatgttg	tggccaagta	ctcagtccta	ggaaggaacc	agctcttgac	300
tggagaggag	aaggaggagc	ttgacaggtt	c			331

<210> 349

<211> 260

<212> DNA

<213> Pinus radiata

<400> 349
acgaaattac cttggggagt atactggaga gttgatttca catcgggaag ctgataagcg 60
aggaaagatt tatgatcgag aagactcctc cttccttttc aacttgaacg atcagtatgt 120
tcttgatgca taccggaagg gggataagtt gaaatttgca aatcattcac caactccaaa 180
ttgctatgca aaggtgatta tgggtgctgg tgatcataga gtgggtattt ttgcaaagga 240
acgcattgca gccggtgagg 260

<210> 350
<211> 479
<212> DNA
<213> Pinus radiata

<400> 350
aaaatttaac agaaacattg caagctgctt gtttaatttc tgtgcttcaa gggaaaggag 60
aggaagagat tcccagagga gaagatcaag ataaatgggg agggggaaga ttgaaataaa 120
aatgattgag aacgcaacaa acaggcaagt caccttctct aagagaagag ggggacttaa 180
aaagaaaagct caggagctct ccttcttatg caatgcagaa gttgctctca tcattttttc 240
cagcaccggc aaactccatg agtgggtcaag ctcgagctca ttctttatgt tacaaaaaag 300
catgaagaaa attctcgaga gataccagaa atcagagcag ggactaggac tcatggatta 360
tcaacatcaa cagctgttgt gtgaaatgag acgaatcacc aaagaaaatg aaagccttca 420
agagcgttta aggcataatga atggcgagga agtcaattca ttgaagctcc cagagcttt 479

<210> 351
<211> 260
<212> DNA
<213> Pinus radiata

<400> 351
gctatttgca gcatttcctt ccatccgtac ccaaaagatg ctgacaaaca ttactagca 60
agacagactg gactgaccag aagccagggt tcaaattggg ttataaatgc acgtgtccgc 120
ctttggaaac ccatggtgga agaaatgtat atggaggaac tttagagaggc cgaaacacag 180
aatcatgcag cagattcgaa ggtaacaaca gaaagtgggtc aaaacaatga agaaacgggtg 240
tcaaaggaag gagctgggaa 260

<210> 352
<211> 176
<212> DNA
<213> Pinus radiata

<400> 352
agggggctgg ttacagctct gtgagcggaa tagatgaaca tgcagctgga ttctgttctc 60
aacttggtgt tgcaccaatt gatgcatctt ttgctgatga tgctcctctg gctgccctct 120
ggtttccgag taattcctct agaatctgga tcagaatgtt tctcctccaa aacgga 176

<210> 353
<211> 338
<212> DNA
<213> Pinus radiata

<400> 353
ggacggagga ggacgaggag ctggtcattt cgtcatggaa cagtttatac ctgagcaggc 60
cgtcatctct gattcgtcca tatcttcggg gaaaacagaa gtttgacgag gtagtgagg 120
ccaatttgag ctgatccgca ggaaagaaga ggggagatgc ggccgtgcct atgctgagcc 180
ttcatttggt gtcactctc tagttacttc attacctcca cagcagcagg aaggccggat 240
ggtaacatcc ctggcagtgg atatggacag ctcatgttct tgtaaacc aaatgaagctga 300
tgccatgaga gcaaaattat ttgcgcagtgt acactatc 338

<210> 354
<211> 405
<212> DNA
<213> Pinus radiata

<400> 354
gggcaagggg aaagacacag atgagaaaga tcgagagcgc gaccagcagg caggttacgt 60
tttctaagcg cagaaatgga ttgatgaaga aagcttacga gctgtcgggtg ctctgcgatg 120
cccaactggg actgattggt ttctcccccga gaggggaaggt ctatgaattc tccagtagct 180
gcatgcagaa aatggttgga cgatacgaaa aatgttcaga aggaagtgc acgagtacat 240
caaaagagca agatgtccag tgtttaaaac gagaaagtgc gaatatggaa gaaaggattg 300
aaattcttga atccatgcaa agaaagatgt tgggcgagga gctggcatca tgtgcattga 360
aggatttgaa tcagttggag agccagggtg aacgagggtt gagaa 405

<210> 355
<211> 332
<212> DNA
<213> Pinus radiata

<400> 355
tctctctggt gtgggggagca ctcaaaatgg ggaagacgaa gatggagatt aaacgcattc 60
aaaaccctag ccgcccgcag gttactttct cgaaacgcaa gaacggattg ctaaaaaagg 120
cattcgagct ttctgttctc tgcatgctg aagtcgccct gatcattttc tcggaaactg 180
gcaagatctg cgagtttgca agccacgacg acatggcaac aatactggaa aaatatcgaa 240
tatacacgga aacacatgga aacatggagt cctcgtcgggt ccaaagcgtg aagattgggtg 300
aatcacaact caaagcgttg cgtgagaaga tg 332

<210> 356
<211> 405
<212> DNA
<213> Pinus radiata

<400> 356
aaactcccca aggaagcaag gcaaaagttg ttggattggt ggaccagaaa ctataagtgg 60
ccatatacctt cggaaagtca aaagatagca ttggcagaat ctaccgggct ggatcagaag 120
caaataaata actggtttat aaatcagcgc aagcgacatt ggaaaccatc tgaagagatg 180
cagttcgtgg ttatggatag tcctaatacct cacaacgctg cttttttcct ggagggacat 240
ctcaggacag atggaactgc cttttcaatg gattgttgaa gttaaacccta tttttgaggc 300
aaacaccagt tttagtgcaa tgctgtagat ttgtctgact catcttttat atgtatagct 360
ggatctctaa aatgggcat gtttcataac gtgctagata tgagt 405

<210> 357
<211> 468
<212> DNA
<213> Pinus radiata

<400> 357
acttttcatg cgtttcgaag gccgccatga ttctggcaga gcacagcgaa ggcgatgcag 60
agctggagga agtagcaggg gaatgttttag agaggggttc gcctttacac agccgattca 120
cgcataccac aaaaagaaaa atgtacagtt ttctaattgga cggcccatctt gtttactgtg 180
ccatagtgga tgaagcgtc gggaaaccgc aggtctttgt atttctcgag catgtcagag 240
atgagttcaa gaaattgtt aagaacagag gttgtgaagg gctcagttcg tgctgttttg 300
ataaagaatt cggctctgtt tacaagcgcc ttgtggctcc tcttgtgggt gttcctcaaa 360
tagaaaagga tcgcttgatg gaggaagaat cgaaatccca acctgctaaa acacatccag 420
tccaggtaaa taattctccc aaagattctc tacctgtgta tgataata 468

<210> 358

<211> 499
 <212> DNA
 <213> Pinus radiata

<400> 358
 aagatgggag cttgggtgatc tgtgaaagat ctctctctgc ggctcaagggt atgcctatgg 60
 tatcacagtc tcaaagcttt gtgcatgggtg aactcctatc tagtgggtat ttgatccgac 120
 cctgtgaagg cagaggagca ttagtcatca tggttgatca caggaactta gaggcttcaa 180
 gtgtccctga agcacttcgt cccttatatg agtcatctac attccttgca cagaagatga 240
 cagttgaggc ttcttatcat cttcaaggta aagttcaacc ggaaatgatt tccttatcaa 300
 aaaaactcca acagccatgt aatgtacggg catacagtc acggccttgc agaggcttta 360
 atgaggcagt caacacatta cctgatgatg gctggatgac attgtccaaa gatgggctgg 420
 gggatgtcac tatttgtgaa agctttgtca aattgccgga accaaatgca tcgcaaatag 480
 cctatgtcaa cagcatggg 499

<210> 359
 <211> 462
 <212> DNA
 <213> Pinus radiata

<400> 359
 acgggctctc caacaattag gcatgattca gcagcatgct tggaggccac agagaggact 60
 tcccagcgca tctgtttctg tcttacgggc ttggctatct gaacattttc ttcacccgta 120
 tccaaaagat gcagacaaac atatgctcgc gagacagact gggcttacc aagagatgta 180
 ctcaaattgg tttataaatg cacgtgtacg cctctggaag cctatgggtg aagagatgta 240
 tgtggaggaa acaaaggagg cagaagtaga ccatggatca aatgataaaa caggtaagga 300
 gagtggcgag aaaaaagaag atgcattgtc aaaggaagga gctgcaggca ataatgggaa 360
 tatacatgag cagcaaagtg ggaaaatctc aaaactcgac aatattgcac aggatggagg 420
 tgctgatgaa aaacctgctg gtgtgcccaa atctgaaaat gc 462

<210> 360
 <211> 357
 <212> DNA
 <213> Pinus radiata

<400> 360
 ggagtgttga aattcccctg ttttgatctg ataactatga atctgatgga gtcttttgag 60
 gcaaagggaa agggagagaa gaggagaacg gtgaggggga aaaccagtt gaagagaatt 120
 gagaacggga ccagcaggca ggttactttt tgtaagcgca ggaatgggtc gctgaagaaa 180
 gcgtacgagc tgtcagtgct ttgtgatgcc gaagtggcac ttattgtttt ctccccaaga 240
 gggaaagctgt atgagttcgc taatcccagc atgcagaaaa tgttggaacg atacgaaaaa 300
 tgttcagaag gaagtaacct gacgagtaca gcaaaagagc aagacgtcca gtgttta 357

<210> 361
 <211> 749
 <212> DNA
 <213> Pinus radiata

<400> 361
 gagcttcac cgcattatt ggggttcaat tcgatcttga tttgccagag acgatgtgaa 60
 ttaccattct gtgggcaaaa gcgagagagg aggagaatgg tgaggggaaa gaccagatg 120
 aaaaggatcg agaacgacac gagcaggcag gttacgtttt ctaagcgagc gaatgggtta 180
 ctgaagaaag cttatgagct ctctgtgctc tgcgatgccg aagtgggact tataattttc 240
 tcaccaagag ggaaactata tgaattcgcc agtcccagca tggaggagat tttggaaaag 300
 tataaaaaac gttcgaagga aaatggcatg gctcagacaa cgaaagagca agatactcag 360
 tattccaaac attccaaaca aaagctcgca aatattggaag aacagattag gattcttgaa 420
 tcaacccaaa gaaagatgtt gggggaaggg ttggaatcgt gttcaatggc agaattaaat 480

aagttagaga	gccaaagctga	acgaggattg	agccatatac	gggctcgaaa	gacggaaata	540
ttggttgacc	aaatagaatg	tcttaaaaagg	aaggaacgtc	tcttaagcga	ggagaacgcc	600
ttactcagta	gaaagtgggt	tgatcgtaa	tccgtggacg	gttccgggtc	aacatcatct	660
tcaattggat	tggaagcat	cgagcagatc	gaagttgaga	cacaactggg	tataagaccg	720
ccaaatgcac	aggatcactg	ttctgtaaa				749

<210> 362
 <211> 670
 <212> DNA
 <213> Pinus radiata

<400> 362						
gtttgcttgc	cgtgaaagaa	atcgaacttc	cggcgcttgg	gtgcgagaaa	tatttgcaaa	60
tcgaacttcc	ggcttgggtg	caagaagctt	ttgcgttttc	ggtttcagat	taaagcaata	120
tggaagtcaga	ggaagacaaa	atatctccag	agaacaagaa	aaggagatta	aaaacccac	180
agcaggtcga	aggtctagag	agcttttatg	ctgaacataa	gtatccttcg	gaagctatga	240
aatcacagtt	atcagaagaa	ctgggattaa	cagagaagca	ggtacaagga	tggttctgtc	300
acaggaggct	taaggataaa	aggctcatga	aggaagaagc	ttccaacaat	ggaaaacaag	360
atccacacaa	tggcataatg	caagattctg	ttaatggagt	caaacaagat	tctagcggca	420
gtggaaaaaa	atctgatcac	caacgccatt	cgaggtgcaa	agaggttgaa	agtcaacgat	480
ttgcgaatgc	catggattat	cctgcagctg	tccttgctgc	agagcttagg	gatcatgatt	540
tggtcaaagt	aaaccatgat	aacgaagaca	cctttgcagg	aagtagttca	gcttcacaag	600
acagatcgtc	attacaaagt	gggaatcctt	atgaagctga	ggcaagaaga	cgcccatttc	660
agaatggtaa						670

<210> 363
 <211> 651
 <212> DNA
 <213> Pinus radiata

<400> 363						
tagacctaat	tctgaggtca	atgaatctct	gctgaaaaca	ctttggcacc	actctgatgc	60
catcatgtgt	tgctccttga	aggtaaacad	gtacaatatc	atagactttc	ttctggagat	120
taatttcaag	tttgcacaat	tcttacgtta	ggctttgttt	ggtgctgtgc	agtcattgcc	180
tggttttcacc	tttgcgaatc	aggcaggcct	tgatatgtta	gaaacaaccc	tggttgccct	240
gcaagatata	tcattagaaa	agataacttg	cgacaatggc	cgaaaaagct	tttgctcaga	300
tattgctcaa	attatgcaac	agggatacgc	ctatctacct	gctggagtgt	gtgtttccag	360
catggggcagg	cctgcttcct	atgacagggc	tattgcttgg	aaggctctca	atgatgagga	420
aaatcccat	tgcatagcat	tcattgtttat	gaattgggtc	tttgtttgac	cattattttt	480
cattgtacaa	attataccga	gtccttgaag	ttaacttatt	gaacaaaatc	tctttctggt	540
caagccttgt	gtgactggcc	aaagaaaaaa	tacagagggg	gagcatgtaa	gcagcatatt	600
tggttgctac	atttttgctt	ttaatttgaa	aaatgaattc	tggttgacaa	g	651

<210> 364
 <211> 257
 <212> DNA
 <213> Pinus radiata

<400> 364						
ccaaagaatt	tgccacgagc	ccgccagcaa	caacaagtcc	acatacaatt	gcgataatca	60
taccttcaac	taccttggtg	aagatggctt	cgcatattgt	gttggtgcag	atgaatccgt	120
tggaaggcaa	gtaccaatgg	catttctgga	gcgtgttaag	gaggatttta	agaggagata	180
tggtgggtgga	agagctgaca	cagctgttgc	taacagcttg	aacagagatt	ttgggtcaaa	240
attgaaagag	cacatgc					257

<210> 365
 <211> 357

<212> DNA

<213> Pinus radiata

<400> 365

gtgaattcca	accaaagtaa	tatgcttata	cttcaggaga	gctgcacaga	tgcattctggg	60
tcgttcgtaa	tttatgctcc	agtggatata	gttgccatga	atgttgtgct	cagtggagggt	120
gatccagatt	atgtggctct	tctgccatct	gggtttgcaa	ttttaccaga	tgggccaaag	180
tgcattggcag	tcaccaattc	aggcattaac	gacctaggca	gtggaggatc	tttactcact	240
gtggcttttc	aaatttttgg	tgactctgtg	ccaacggcta	aattatccct	ggggtctggt	300
gcaacagtga	atagtctcat	ttcatgcact	gtggacagga	ttaaagctgc	tggtact	357

<210> 366

<211> 309

<212> DNA

<213> Pinus radiata

<400> 366

attcactggg	atttttagcag	cttttgtttc	atctaaggctc	acagagcatc	agccccctgg	60
tcacatgcct	tcggctcacac	agggctccgc	catggccaac	cccaatttcg	tggctttgca	120
taataatcag	ggctcatgacg	gaggagcaaa	tggagaccct	gcgaggcaa	atttgcgttt	180
attcaacaat	tggcagtcag	ttggtagaaa	tgcacagagc	catgtcacag	cagcaggcct	240
tcttcagtgg	ccgactctgc	ttatgggaca	acacatgctt	tatgatctag	ctcaaggaaa	300
tccagggtt						309

<210> 367

<211> 575

<212> DNA

<213> Pinus radiata

<400> 367

ggaaggaaa	aatggggcg	gggagcgctg	agctgaagcg	gatcgagaat	aagattaacc	60
gtcagggtcac	gttttcgaaa	cgccggaatg	gtctgctgaa	aaaggcgat	gaactttcag	120
tggttatgtga	tgcagaggta	gcactgataa	tattctcaag	cagaggaaaa	ctctatgagt	180
tcggaagcgc	cgggtatggt	attgaaatct	ctggactttt	ttctgggatt	ttgtattata	240
atattagagt	tggagaaggc	tgtgaggagg	agaagagagg	ttgtaaagtt	tattccgtga	300
tttgtttttaa	aggaaaatct	taaattagct	aaaacttttg	tgcacgttca	aaaggccttt	360
aaattttctc	tccagttgag	agtattttga	gaaaataagc	cgaatgcgcc	cgggagccac	420
acaattgtag	caagcttcag	tttattttca	aagcatttct	ccgaataagc	tagaaatgct	480
aagaattttg	tgaatcgcta	aagcatttgt	aacatatagc	gcagatatca	aaaaaataaa	540
gaattttatcg	gtaaaaaaa	aaaaaaaaaa	aaaaa			575

<210> 368

<211> 243

<212> DNA

<213> Pinus radiata

<400> 368

ctgagagtta	agtgattggt	gggagggaaa	agagaaaaaa	gaggagatca	agaatgggtga	60
ggggaaaaaat	ccagatgaag	aggattgaga	atacgccag	caggcagggt	acattttcca	120
agcgtagaaa	tggattgctg	aagaaagctt	acgagctctc	ggttctctgc	gatgcagaag	180
ttggacttat	gattttctcg	ccaggaggaa	agctctatga	attcgccaat	accagcatgg	240
aga						243

<210> 369

<211> 184

<212> DNA

<213> Pinus radiata

<400> 369
ctatgctatt acagaatgtg cctccagcac tacttgctcg cttcttgctg gaacatcgct 60
cagagtgggc tgattgtaac attgatgctt attcttcagc taccatgaaa gcaaatgctt 120
acaatgttcc aggttcactg ggaggcatta cagggagtca agttatcctt cactggcac 180
atac 184

<210> 370
<211> 158
<212> DNA
<213> Pinus radiata

<400> 370
acatcccgtc ttcactttgt tgatcaacaa ttacgacaac agcgagctct tcagcagcta 60
ggaatgatac agcagcatgc ctggagacca caaagagggc ttccagagag ggccgtttct 120
attctccggg cttggctatt tgagcatttc cttcatcc 158

<210> 371
<211> 462
<212> DNA
<213> Pinus radiata

<400> 371
gcagtgggtca tatggatggg ggatccggag aggaccaaga tgccgccgat caagatcacg 60
atcacgatca cgatcatgat caccagcagc agcagacgcg gaggaacgt taccacagac 120
aactgctcg tcaaattcag gagatggaag cgttggttaa ggagtgtcca catcctgatg 180
acaaacaaag gcagcggctc agcattgaat tgggccctta agccgcggca ggtgaaattc 240
tggtttcaaa atcggcgtac tcagatgaag gctcaacagg atcgctcaga caacgccatt 300
ctccgtgcag agaatgaaaa tctgcggaac gagaacgtag cactccgaga agcaattaaa 360
aatggtgctt gtccaaactg cggaggggtc acatcgctgg gagagatgcc tggattcgac 420
gaacaccatt tccgtataga gaatacgcgc ttaaaggagg ag 462

<210> 372
<211> 510
<212> DNA
<213> Pinus radiata

<400> 372
gcaaccggag ctttaagact agaatatata tgtagccctc gggctctgac gaatactgaa 60
actagagata cccacctctt atctggtgtg taaggcacgc aaaatgggaa agaagaagg 120
ggaggtgaaa ctcatcctc accctaccag tcgccaagga tgtttctaca accgcaagt 180
cggtttgctt aaaaaagcgt ttgagctttc tgttctctgt gatgctgaag ttgcccttat 240
aatcttctcc caaaccggca agatttacga gtttgcaagc catgacgacg tcaacgcaat 300
tctcgcaaaa taccggatac aaacgggaac aacaacaaac gcgatgcctt cctcgcttca 360
aaacaccgag ccggagacgt tgcattgagga gacaaatatg ttgggaaaaa ggaaaaaagt 420
ggagaagtgt catgagaaga tcaatatgtt ggaaaaaaga ggaaaaaaca tggtttggtg 480
aaaatttgga gtcattaacg gtcaatgaat 510

<210> 373
<211> 466
<212> DNA
<213> Pinus radiata

<400> 373
tggatcacca tgcagtagag gatagggagt taaaaaatca tctccttcgc aaatacagtg 60
gatatttgag tagtctaaaa caggaattca tgaagaagaa aaagaaagga aagctcccta 120
aagatgcacg gcaaaagtta cttgattggt ggagtctgca cgacaagtgg ctttatcctt 180

cggaacgga	gaaaatagct	ttggctgaat	gcacgggggtt	ggatcaaaaa	caaataaata	240
attggtttat	aaaccaaaga	aaacgccact	ggaagccttc	tgaagatatg	cacttcatgg	300
taatgaacag	tcacagtcct	cacagtgcgt	ccttgatgtg	tgagagacat	atgatgactg	360
aagggatatct	ttagattgct	agaaagaacc	ttcggctgaa	aacagcacac	aatgctattg	420
cttttggtgt	atttaattgg	catggctttc	aattttaaaa	aaaaaa		466

<210> 374
 <211> 573
 <212> DNA
 <213> Pinus radiata

<400> 374						
atctctgttg	ggatctagaa	ttgagaaagg	gacgcttggt	ggctgggtggg	tttcacaaat	60
gagaggctcc	tcccggtgat	atgatgcatt	ttattctatt	tggtgatcct	gtcaatggaa	120
aaaaagagag	cagtcgaatt	tggcattgaa	atacatgac	agcaagagat	tgaaacgtag	180
cttatggacc	cccgaaggaa	tggtgggggg	gaatacgagg	taggaggtag	ccagccgaaa	240
gagctgatct	cagagaacta	ttatacaaac	acagtctgca	aaagaagaaa	tactgtgatg	300
cattttttgga	tgatgcagta	aaggcagaca	cctatgaaaa	aattgtttca	ttctgagata	360
tggaacacct	gaatgcagct	gctgcccagg	cctcctcttc	gctttatgga	gttagcatgg	420
ccgagtacgg	agacgtcggc	gtcagctcaa	tgatggcgct	gatgacccaa	cacgagcctc	480
atgaaagcga	gagcacaatg	acgacgagta	tgcttagttc	attttcatcg	ttccatggcc	540
atgctgaatg	ccttctctca	gcagcaatgt	tcc			573

<210> 375
 <211> 526
 <212> DNA
 <213> Pinus radiata

<400> 375						
ggattcttgt	atttttgtgt	gttgctgctg	caacagttct	taaataccaa	gacattgatg	60
agagcttgag	taatatttct	gcaaaaaccc	aagtaaacc	tgaagctagt	ccaaactagt	120
ggaaggaacc	tcggctattc	tgtaagttca	ctcagatttt	gagaaactct	tgggattttg	180
ctcaaaatgg	ggcgtggtaa	aatagagatc	aagaagatcg	agaacagcgt	gcacaggcag	240
gtgaccttct	gcaagcgccg	aggcggtctg	atgaagaaag	cctacgagct	ttcagtgtctg	300
tgcatgacag	atgtagcgct	cattgttttc	tcgagccgag	gaaagtgtga	cgagctgggc	360
accagcaaca	acaacaacaa	cagtatgagg	tcaatattgg	aaagatatca	aaagtgttca	420
cagacggcaa	aacatatgaa	cttttcgaat	aatacttcag	acgagaaaa	gaagcaagaa	480
ataaattttac	ttaaacacaa	attgatcagc	taaacttact	aacaga		526

<210> 376
 <211> 335
 <212> DNA
 <213> Pinus radiata

<400> 376						
aaaatggcgg	cttagatgaa	ttacgagcag	agactcatcg	cagcggcacg	gctagctgac	60
aacctgaact	ccacgactgc	aaaagaattt	gatattccca	gcgctgaaga	agttgccgag	120
aaatgttcag	aatggggagt	caccgcacag	ctgaaggcac	accaggccca	aggactgtca	180
tggtgatac	gccgatatgc	cattggcgct	aatgttatac	ttggggacga	gatgggactt	240
gggaaaacat	tgagggtat	aagtttgttg	gcttacttga	aagatcgacg	gaaatgccca	300
gggccatttt	tggtattgtg	tccattaagc	gtaat			335

<210> 377
 <211> 773
 <212> DNA
 <213> Pinus radiata



<400> 377

gaagtgtgga	tgttcttact	gcttttctcaa	ctggaaatgg	aggaacaatt	gagcttttat	60
acatgcagat	gtatgcgcca	actacttttag	cttctgccc	agatttctgg	actcttagat	120
acacttctgt	attggaagat	ggtagtcttg	tggtttgcga	gagatccttg	agtggaaactc	180
agggaggtcc	cagcatgccc	gcggtgcagc	agtttgtag	agcagaaatg	caaccagtg	240
gatatttgat	tcggccatgc	gaaggtggag	gttctcta	tcattattgtt	gaccatatgg	300
atttgagacc	atggagtgtt	cctgaagtgc	tacgtccact	gtatgaatca	tccactgtac	360
ttgccccaaa	ggttacaatg	tcggccttac	gccatttgcg	tcaaatagca	caagaggcat	420
cttctgatgt	ggtccttggc	tggggaagac	aaccgcgtgc	attacggaca	tttagccaga	480
gattgtgcaa	gggtttcaat	gaggcagtta	atggcttcac	agatgatgga	tggtctttga	540
tgggtaacga	cggaatggag	gatgtaacta	ttctcgtcaa	ttcatctcca	agcaaactgt	600
tcggtcaaca	gtttgcttct	tccgatgggc	ttctcgtct	tggtgggggc	atcctatgtg	660
ccaaggcttc	tatgctatta	cagaatgttc	ctccagcatt	gcttggttcgt	ttcttgcgag	720
aacatcgatc	agaatgggca	gatagtaata	ttgatgccta	ttcagcagcc	tct	773

<210> 378

<211> 407

<212> DNA

<213> Pinus radiata

<400> 378

atggcaatgg	aagagaggag	tggtgatctt	ttgaaaggct	gtggtctttc	tgagaatgca	60
ttggatgcta	tctctgagg	ttctatacag	aatcattggg	catggtcaga	agtcaagcaa	120
ttgtctgtaa	ctcttcttcg	tgctctagat	gcgggaattg	aacactctct	ccttggttct	180
atgatgtcaa	tagacagata	tgcagcagca	gagagctttc	atagacttgc	ttgggcttat	240
gcacacgtgc	cagatctgca	tatcatgtgg	cttcttcatt	tatgtgatgc	tcataagag	300
atgcagtctt	gggcagaagc	tgcgcaatgc	gcagtggctg	ttgctggggg	cataatgcag	360
gcattggtag	gaagaaatga	tgctgtctgg	ggaaaggagc	atgtaac		407

<210> 379

<211> 385

<212> DNA

<213> Pinus radiata

<400> 379

cgaggtcgag	tccagctgag	gaggatcgaa	aacaaaatca	gtcgtcaagt	aactttttct	60
aagagacgga	acggactgat	gaaaaaggcg	gcggagctgt	caatactgtg	cgacgctgaa	120
gtggccttaa	tcgtcttctc	caacaaagac	aaactgtacg	agttcgccag	ttccagtatg	180
accaagattt	tggaaagata	tcggaagcgt	tcaaatttaa	tacaagatat	cggtaaagat	240
ccacagaatt	cagacattga	gttgacgcgt	ctaaaagaag	aggttgaccg	cttacaagaa	300
tccagaaggc	atcttttggg	tgaagacctt	catcaactag	gtgctacgga	tctgcaacac	360
ttagaacaac	agcttgaaga	agcgt				385

<210> 380

<211> 513

<212> DNA

<213> Pinus radiata

<400> 380

tttcaatgcc	cctctttttc	cagtggacga	gtgttcaatt	ttccctgtgt	tgatctgata	60
cctataaatc	tgatggattc	ttttgaggca	aagggaaagg	gagagaagag	gagaacgggtg	120
aggggaaaaa	cccagatgaa	gaggattgag	aacgcgacca	gcaggcaggt	tactttttct	180
aaacgtagga	acggtctcct	gaagaaagct	tacgagctct	cggtgctttg	tgatgccgaa	240
gtggcactta	tggttttctc	cccaagaggg	aagctctatg	agttcgccaa	tcccagcatg	300
cagaaaatgt	tggaaagata	cgagaagtgt	tcggaaggaa	gtaaaacaac	aagtatagca	360
aaagaggaag	atcccaaggc	tttaaaacga	gaaattgcga	atatggaaga	aaggattgag	420
attcttgaac	gcacgcaaag	aaagatgttg	ggcgaggaac	tggcatcatg	tgcattgaag	480

gatttaaattc agttggagag ccagggttga cga

513

<210> 381

<211> 210

<212> DNA

<213> Pinus radiata

<400> 381

cacagttctg	gaacctgtta	aagagaaatc	agtcgaggtc	aaactccttc	tgtttgcacg	60
aggatgccca	gcattatgga	gaagcaaaat	agtgggtgaag	atagtgatag	caagggtcag	120
cttgataatg	gcaagtatgt	ccgttacacc	aatgagcagg	tggagacttt	agaacgtgct	180
tataatgaat	gctcaaagcc	cagcacaagc				210

<210> 382

<211> 380

<212> DNA

<213> Pinus radiata

<400> 382

cttcgttctc	caggatttct	cgacagggtt	taaacgacgc	tagcaacccc	ctgtgatttt	60
acagtctgtt	ttgccaggcc	ggtgaaaatg	ggtgcattcg	cccttctatc	aagctggatt	120
gatgctgcca	ctaattccaa	gtacaggaag	aagcgtaaac	aatttcagac	cgtggagttg	180
agagttcgaa	tggactgtga	aggctgtgag	agaaaagtga	gaaacgcact	aaattcaatg	240
aaaggagtaa	gttctgtaga	agtggagaga	aaacagtata	aggcaacggg	gacgggatac	300
gtggatgcca	acaaagtgtc	gaagagagtg	aggcaaacag	ggaaaaaggc	agaattgtgg	360
ccttacaagc	cttaccatct					380

<210> 383

<211> 407

<212> DNA

<213> Pinus radiata

<400> 383

ttttcaaaca	cttggttttc	aggcaattta	cttgcccctg	gagccaacaa	acagatgcat	60
cttgattcca	gttctactgg	agcaccaggg	ctctcaaatt	ttctgatagg	ctccaagtat	120
cttaaagcag	cacagcaatt	gctcgacgaa	gttgtcaatg	taggtaaggg	catcaagcct	180
gattcagcca	aacatcagaa	atcacaaatc	tggattggaa	caacagctaa	taaagagaat	240
agtggagctg	aaggtgggtg	gaaggatgga	gcagctgctg	cccctacatg	gcgttcaact	300
tcagcccaag	aaacaaatga	ccgtccctct	gagctgtcac	cagcagaaaag	acaagagctt	360
cagatgaaaa	aagcaaagct	tgtggccatg	ttggatgagg	ttgatca		407

<210> 384

<211> 441

<212> DNA

<213> Pinus radiata

<400> 384

ggcaagaata	gttgccctgat	agcacggaat	ttattaagtg	gccttagaac	gtgttcagag	60
atcgctgaat	acatgtccca	caatgtatct	gcaatacagc	atggagtggg	ggatgtatca	120
acactccact	ctgatggtag	caggaagact	gattgtgggt	atattctgaa	gttcggacaa	180
gagcaagatt	ttggcgtaga	aaagggagag	tgcgagggtt	taagtacaca	tgcaagtctg	240
ctgggtcatcc	atcaatcagg	aaaagaatta	aagatggaaa	aggacagcca	tgtagacaat	300
atacaccatg	tggttgtcaa	ctgacatgtg	gaaagcaatg	cccttgccct	cgaaatggga	360
cttgctgtga	aaaatattgt	gggtgctcaa	agagttgcaa	gaaccgtttc	agaggttgct	420
attgtgctaa	gagtcaatgc	c				441

<210> 385

<211> 423
<212> DNA
<213> Pinus radiata

<400> 385
agcagatgaa agccttttga ttccgaacct ggatgctggt aaagaaactc ttagctatga 60
agaatacatg cgccaattcc cttccacaat tacgccaaaag cctataggcc ttgccactga 120
ggcgactaga gaaactggca tgggtgatcac aaacagcttg aatcttggtg aaacactcat 180
ggatgtggat cactggaagg aaatgttccc ctgcatgata tccagggcag ccacagtcga 240
tgtaatatcg agcgggaatgg gcgggacaag gaacgggtgca ctgcaactga tgtatgcaga 300
attgcaagtg ctttcaccgt tggttcctgc tcgagagtac ttctagagcg gccgcgggcc 360
catcgatttt ccaccgggt ggggtaccag gtaagtgtac ccaattcgcc ctatagttag 420
tcg 423

<210> 386
<211> 445
<212> DNA
<213> Pinus radiata

<400> 386
gcaaagcgaa aatattatgt ccacgaggat cccaagctcg ttttcatcat tccatggcca 60
tgccgattgc cttctctcag cagcaatggt tcaggggtct caaggagatc ataagctcaa 120
tccacagcct gggatgaacc agcagctagt ctctgagcag tctatcatgt cagattcgtc 180
catgccgttt gttaagacaa aagcttgctc tgggtcttct aatcagtttg aatttcacag 240
ggaacaaccc ggaaattgct acacagatca gtccctcaaat attccgctaa gccccatagt 300
cacatcggtta gcctcgagcag ctcgaggaga agcgcgggat ataccgtcct tggatgccaa 360
cagtgtcat ttcaatgtgg ataacgagga gcatgcaata aaatcgaaaa tcttagcgca 420
cccacagtat ccgagcttgt tggga 445

<210> 387
<211> 343
<212> DNA
<213> Pinus radiata

<400> 387
gaactagtca atcagagatg ccatgagaaa tcccatctgc acaaactgtg gaggacctgc 60
tgttcttggc gagatgtcct ttgaagagca gcaacttcgc attgagaatg cccgcttaaa 120
agaagagctg gatcgattgt gtgcactagc agggaaagttc tttggcagac ccattccttc 180
aatgccatct gttcccctta tgcctaaatc atccctagac cttggagtcg gtggcatgcc 240
cacttcgttg ccctcggcta gtgcagactt gatgcatgga cctgctggtg gtcgaacagg 300
aaacataata ggtattgaga ggtcgatgct ggctgagctt gct 343

<210> 388
<211> 1193
<212> DNA
<213> Pinus radiata

<400> 388
ccgttggtgt tcttttctcc accctcagcg tctccttaca cacacaattc aatcaatccc 60
ctcgccacgc caccgcgttc gcctgttctt cctcctctgg atcaacccat tcccacagtc 120
ctacttcgct caatccgacg gctaattttt gcgaaatctc tgtctctttc tcttattacc 180
ggtttctgat tagaaactgg caaaaacaga ggatttagca gtacccaact ggggaacaga 240
gcgttccgaa tgatgggtat tggtgtttcc tgctgtctgg tatctcgcat gcgagctctc 300
tgagagaagca gcttctttcg ccataaagtt cacatatctc tgggcaacta ctggttttgc 360
tagcgattct gaggtgggca tatgctcagc ttttaatgct actagaggac accgtttgaa 420
ggagtttttc tctgaggaga tgatgatgtc tgggtgggaga atgtatggtg ggccgaacgt 480
ccttgctcag gccaacgaga acatttcccg ctctgcagat gcactggaag ctctactttc 540

ttctcctggt	ttcaatgggt	caagatctgt	agctaatttg	gaggaggtga	taggtaatgt	600
gtcaaaaaga	tcattttaca	attcctttga	ccaggaagaa	actggagatg	aagaccttga	660
tgattgtatc	catccaccgg	agaagaagag	aaggctgact	gctgaccaag	tgcagttcct	720
ggaacgaagc	tttgagatcg	aaaacaagtt	ggaacctgag	cgcaagatac	agctagccaa	780
ggagttgggc	ctccaacctt	ggcaagttgc	agtctgggtt	caaaaccggc	gggcaagggtg	840
gaaaacaaag	cagttggaaa	gggattatga	tattctgaaa	tcacgctatg	agaatttgag	900
agttgattat	gatagcctgc	tcaaagaaaa	ggataaatta	agggctgagg	ttaccttcct	960
aacagacaag	ctacacgaca	gtgaccatga	agccctcaca	aaggattctg	agtctgctga	1020
caagaaagtc	tatccccagc	ctgcctccca	ctctgactgt	gttggggagc	ctgaaagaag	1080
tactgctgcc	aaggatacac	caccaggttg	taaacacgaa	gatcttctga	gctctggaac	1140
agatagcagt	ggggctcctg	atgaagatag	tcctcaccat	gttgactgtg	gtc	1193

<210> 389

<211> 385

<212> DNA

<213> Pinus radiata

<400> 389

aaaattgaga	atactacaag	ccggcaggtt	acattctgta	agcgggaagaa	tgggttgctg	60
aaaaaagctt	atgagttatc	tctgctgtgc	gatgcagaag	tggctctcct	cattttctcc	120
accagtggga	gactctatga	atttgccaat	aagagtgtta	gcgcgacaac	ggagcggtag	180
atgagaacct	atgcagagaa	catgcctcag	tctcgagctc	tgtatccgga	ttgtcaccat	240
tggcaagagg	aagtcagaaa	acttacacag	caacgtgata	gtctaacca	ttcgatcaga	300
caaataatgg	gtgaaggcct	tgaatcatta	agcatgaagg	agctcaagca	tattcaagtt	360
caattggaaa	aaagtattag	ttgtg				385

<210> 390

<211> 359

<212> DNA

<213> Pinus radiata

<400> 390

gtacactgca	gagcaggtgg	aagctctgga	acgcctttac	aatgactgcc	caaagcccag	60
ctctctgctg	cgccagcagc	tcatcagaga	atgcccaatc	ctttcacaca	tcgagccgaa	120
gcaaatacaa	gtctggttcc	agaatcgaag	atgtagagag	aaacagcgca	aggaggcaag	180
tcgtctccag	actgtcaaca	gaaagctcac	agccatgaat	aagcttctta	tggaggagaa	240
cgatcgctt	cagaagcaag	tctcgcagtt	ggtttacgag	aatggctatt	tcagacagca	300
gatacagact	gtttctatta	ccaccacaga	tactagctgt	gagtctgttg	ttactagcg	359

<210> 391

<211> 257

<212> DNA

<213> Pinus radiata

<400> 391

caagcatgaa	tttgatgtgc	ggatcagaa	gcttgaggac	aaactatata	ttgcacagct	60
ttattttccc	ctgattggac	tgatattgga	tgagatgccg	gttttttaca	acctcagcac	120
agtggagaag	cgtgaagtgc	taatctgtat	catgcagata	atccgcaatt	tggatgaccc	180
atctcttatt	aaggcatggc	aacaaagtat	tgctagaaca	aggctctttt	tcaagcttct	240
ggaagaatgt	cttgtcc					257

<210> 392

<211> 290

<212> DNA

<213> Pinus radiata

<400> 392

ggcctcctcg	tgactatgag	actcttcgca	gcgactgaac	cgaaacgtgt	cttcgcagtg	60
acaaaacgta	tttttcttct	tggtttctgt	tctttctttc	tgcgtagagg	cctcgtagcc	120
agcgtgtggc	ttcctgtttc	tccgcaaaga	ttatttgatt	tcttgaggga	tgagagactc	180
agaagcaagt	gggatatact	atcaaattgga	ggccaatgc	aagaaatggc	tcacattccg	240
aaaggacaag	atcctcgcaa	ctgtgtttct	cttctaagag	caagcatatg		290

<210> 393
 <211> 465
 <212> DNA
 <213> Pinus radiata

<400> 393						
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caaaacagt	caggtaattt	cattaatatg	ttacttgatg	gaacaaaaga	atgacagagg	120
acctttcttg	gtagttagtc	cttcctctgt	attgtctggg	tggctgagtg	aaattagctt	180
ttgggccccct	agcatcagta	aaattgcata	tacaggttct	cctgatgatc	gccgtcgatt	240
attcagggag	aacattttct	agcaaaaatt	taacgtgctc	ttaactacat	atgaatactt	300
gatgaacaaa	cgatcgacca	agactgagta	aaatttcatt	gcattatatc	ataattgatg	360
agggacatcg	cataaaaaat	gcattcttgc	aactgaatgc	tgagctgaag	cactatcata	420
gtagtcatcg	attattgtct	acgggaacac	cactccagaa	taatc		465

<210> 394
 <211> 157
 <212> DNA
 <213> Pinus radiata

<400> 394						
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ctcaaattgg	ttcataaatg	cacgtgtccg	tctctggaag	cccatggtag	aagaaatata	120
tatggaagaa	atcaaggaag	ctgagtttag	acattca			157

<210> 395
 <211> 384
 <212> DNA
 <213> Pinus radiata

<400> 395						
accaatttta	cggcgaagca	accgaccccc	ctgaaatccc	cttaacacga	atttctgagc	60
tggggccggg	attgtgttagc	agcaggatga	tgacgcgaag	gtttatgaat	cccccttctg	120
acggaagaac	gcagaggcac	cgcgaccccg	atggagattt	ctaccccttg	aatcgccctt	180
tgaaaatcct	taccagggtc	tcatgaagca	ctgcacatcc	ctgctaaaaa	cgctaataaa	240
tcacaaattt	ggttatgttt	ttaacgagcc	cgctgatcct	gtggcccttg	gggttcccga	300
ctatttcact	gttattacct	cgcccatgga	tttgggcacc	atcaaggcaa	aattgcagga	360
cagcgtttat	tcaagccctc	tcga				384

<210> 396
 <211> 694
 <212> DNA
 <213> Pinus radiata

<400> 396						
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ctgcatttcc	tacgggaaaa	ggaggggcag	tcgagcttct	atacacgcaa	atgtacgctc	180
caactacatt	agcccttgct	cgggacttat	tgactctgag	atacacatca	ttgttggaag	240
atggcagcct	tgtggtttgt	gaaaggctcat	tgactgggtac	tcagagtggg	ccaaacatgc	300
cgcctgtcca	gcactttgta	agagcacaga	tgcttcccag	tggttatttg	atacgtccct	360

gtgaaggtgg	aggctgtata	attcatattg	ttgatcatat	ggacttggag	ccttggagtg	420
ttcctgaagt	tatacgccca	ctttatgaat	catctgctgt	actggcccaa	aaaatgacca	480
ttacggcatt	gagacatttg	cgtaagtag	ctcaagaggt	ctcaggtgaa	gtgggttctg	540
gttggggtag	gcagccagct	gctctgcggg	catttagcca	gagactgtgc	aggggtttca	600
atgatgctgt	gaatggcttt	gcagatgatg	gttggctctt	gttgggtagt	gatggggtag	660
aggacgtgat	cattgccata	aattcatctc	caag			694

<210> 397
 <211> 493
 <212> DNA
 <213> Pinus radiata

<400> 397						
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acatgcttgt	ggtaggtgtg	ctgtgcaagc	atgggggtgt	gttagtttgg	aaccttcaga	360
ggtagctgaa	gccttgccag	ataaggtatc	ttggctttgt	gactgccgga	agatggaggt	420
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tgctccaata	act					493

<210> 398
 <211> 436
 <212> DNA
 <213> Pinus radiata

<400> 398						
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gctgaagtcg	cccttatcat	tttctcggaa	actggcaaga	tcagcgagtt	tgcaagccac	180
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gcgggattca	gtgtttgtgg	atgatcccta	ttattgcagt	gtgggttggg	gcacgagggg	360
tgcagttgac	tcgactcata	tgattggaag	gttgggtgaat	cacaattgaa	agcgttgcac	420
gagaggatgg	acaatt					436

<210> 399
 <211> 419
 <212> DNA
 <213> Pinus radiata

<400> 399						
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tctgagaact	gattgtgtct	tccttcggag	ggagaggggt	agcgaggttc	agaaagagag	180
agaaagagaa	agtagtccta	agggactgtt	taaaatgggg	cgaggtccag	tccagctgag	240
aaggatagaa	aacaaaataa	atcgtcaagt	aacgttttcg	aagagacgga	atgggctgat	300
aaagaaggcg	tcagagctgt	caatcctgtg	tgatgcggaa	gtggccttaa	ttgtcttctc	360
caacaaaggc	aaactctatg	agttctccag	ttccagtatg	accaagattt	tggaaagat	419

<210> 400
 <211> 690
 <212> DNA
 <213> Pinus radiata

<400> 400
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 aggtctgata gactaacaag taaattgtca ggaagtctga gttcttttcg ggcttctca 180
 agggatggga tgctaggaac taaatttcta ggtagtgtga atggccctga gtgtaacaaa 240
 ccgatgcac atggtacgaa tgcaattgga gcagcagagc tctcaaacac ttttaactggt 300
 tccaaatatt ttaaagcagc acagcaatta cttgatgaag ttgtaaatgt tggaaaggg 360
 atcaagtctg attcagctca ccatcaaaaa tcccaaacat ggtttggtgc aatatctgac 420
 aaaaagaata ttgcaactga agctactaca aatgaccgaa caacatctgc aataacagga 480
 gcttcaattt ctgcagaagt aatgaaaaac gagcatgctt ttggactcac accagctgat 540
 agacaagaac ttcagatgaa aaaggcaaaag cttgttgcca tgttgatga ggtggatcga 600
 aggtacagac agtactatca tcagatgcaa atcggtgttt catcgtttga gaccgcagct 660
 ggatttgggg ctgccaaagac atacacttct 690

<210> 401
 <211> 383
 <212> DNA
 <213> Pinus radiata

<400> 401
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 ctctattgta tcatagtatt cagcaagaga ggccatgggg cggggaaaga tcgagctgaa 180
 gaagatcgaa agcacaagca acaggcagggt gacgttctcg aagcggcgga tgggggttgc 240
 taaaaaggca caggagcttt cgtctctatg cgatgcagag gtcggcgctca tcatcttctc 300
 taataccggc agactctacg acttctcgag ctccagtatg gagaagatga ttgaaacata 360
 ctatcgattt attgaaaaaa atg 383

<210> 402
 <211> 846
 <212> DNA
 <213> Pinus radiata

<400> 402
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 gatagacttc ctaccattgg atttgtgtct gttgcaggct gcataatgtg tttccatttt 180
 ggcgattgtt tctttgaatc ttaattgcta gttttctac ttttgtatgg ccttttaggt 240
 aacattgttc ttagttttac aggtccttga tcgggggtgaa aagatagaac ttttggttga 300
 caaacagag aaccttcgat ttcaggctca agacttccag aagcaggga cacaacttcg 360
 ccgaaaaatg tggtttcaga acatgaaagt caaactgggt gttcttggaa ttgtctttgt 420
 gttgattctt ataactctggc tctcaatttg ccatggattt aagtgccatt aatcttgatt 480
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 aatgtatttc attcacttgg atactctcat cattagatac tgattatcta tgttttctc 660
 tgacgaggga caatgcctcg actcttcata gtttaggtta ttggcactac ccatcagctg 720
 tgatgtcaat ctcttttata aatatgaatc cctgcttttg gttttcaatt ttaacgttca 780
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 aaaaaa 846

<210> 403
 <211> 333
 <212> DNA
 <213> Pinus radiata

<400> 403
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atgtaggcag	tttacaccat	gtgattgtca	atccatgtgt	ggaaagcaat	gtccctgcct	240
acgtagtggg	acttgttgtg	aaaaatactg	tgggtgttcg	aaaggctgca	agaatcgttt	300
ccgaggatgt	cactgtgcaa	agagtcaatg	tcg			333

<210> 404
 <211> 881
 <212> DNA
 <213> Pinus radiata

<400> 404						
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taattcagag	tttghtaatgg	ggaaggataa	gatgccgccg	ccgccaccgg	ataataagaa	240
agggggaatg	aagagaactg	ctcagggcaa	gtcagaaatt	agggaaacaa	agagacctgt	300
tgctgatccc	atgaacggca	agatactgca	agatgtcatg	aaacagtgcg	gatttctgct	360
atccaggctc	atcaaacaca	agcatggctg	ggttttttaa	gccccctggg	acactgtagc	420
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gaagaatttt	ccttttggtg	aaaccccaaa	gaagaatttg	aagaagacgg	agcctcttct	780
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<210> 405
 <211> 434
 <212> DNA
 <213> Pinus radiata

<400> 405						
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acttcttgca	aagacaatga	gaatctacag	caccaactac	aggcttctta	taactggcac	180
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ttttagttct	gctgaaactt	ttgatgactg	gttccaaata	tcagctgaca	atgaccaaca	300
agaagtgggt	caacaacttc	ataagggtct	tcggccattt	cttctacgga	gactgaagtc	360
agatgttgaa	aagggtttgc	ctcctaaaaa	ggaaaccata	ttgaaagttg	gaatgtcaca	420
aatgcaaaag	caat					434

<210> 406
 <211> 450
 <212> DNA
 <213> Pinus radiata

<400> 406						
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ttgggatttt	gctgaaaatg	gggcgcggta	aaatagaaac	caagaagatc	gagaatagcg	120
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acgaacttga	aaccagccac	agcaacagga	acaagtatgc	ctgaccatat	tcaacttcta	300
ctacacatca	atgccgggtg	ttttaattcta	catttattga	tcattgaatg	ttgcttttgc	360
ttcttcta	gttctaggcg	ggctacattt	aatttagagg	gttcattctg	gaatctgact	420
agccatcagt	ttctattctg	tgataaggga				450

<210> 407
 <211> 376
 <212> DNA
 <213> Pinus radiata

<400> 407
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 aataaatcgc cttgctgctc gtagtgacga agaatttttg ctctttgaga aaatggatga 240
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 ctgggtcttt tcagtcctta caggaaagaa tgacaaagggt gttgaaaata tggattccaa 360
 tcttggtttt gaccag 376

<210> 408
 <211> 551
 <212> DNA
 <213> Pinus radiata

<400> 408
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 aagttgcggc gcgtctagat gcgcttagcc atgaatacga aaaccaacaa catcggtcga 180
 gtctgagcat cggaatggac ccagaactag atcaatttat ggaggcttac tgcgaaatgt 240
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 agaatgatga aaagaccgag ggaggtgcat cttcagagga ggtcgaggat ggcagtgggtg 420
 gtgaaacgga ctttcaggaa gtggatcacc atgctgtaga agatcgggaa ttaaaagatc 480
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 aaaaaaaaaa a 551

<210> 409
 <211> 366
 <212> DNA
 <213> Pinus radiata

<400> 409
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 ttcccagatg ataatttttag ctctttttaa actcgaagct tggttgctct tgggtcaaagt 360
 gcaaat 366

<210> 410
 <211> 346
 <212> DNA
 <213> Pinus radiata

<400> 410
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 cctagccctg aaggaggagaa gagcatactt aagttagctg agcgcatggg cacaagcttc 180
 tgcgctgggt taagtgcac aactgcacat acttggaaca ctctgtctgg aagcgggtgct 240
 gaagacgttc gtgtgatgac cagaaagagt gtagatgac caggcaggcc tcccggcatt 300

attcttagtg ctgcaacatc cctctggctg cctgtgcccc ccaaaa 346

<210> 411
<211> 393
<212> DNA
<213> Pinus radiata

<400> 411
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agatgttgat attttctcaa tggactaaag ttcttgactt gctggaatac tatctaagtg 180
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ctggtggtct tggaatcaat cttactgatg cagacacttg ttttatctat gatagtgatt 360
ggaatcctca aatggatatg caagctatgg atc 393

<210> 412
<211> 830
<212> DNA
<213> Pinus radiata

<400> 412
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gtgagggcat gcattgacct tcagcattct cttctaacac taacaggagt 830

<210> 413
<211> 371
<212> DNA
<213> Pinus radiata

<400> 413
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taatgaactt cacaagccca actccaacgg cacatactct ctctataatt tgcctttcac 360
agcaatgtct g 371

<210> 414
<211> 395
<212> DNA
<213> Pinus radiata

<400> 414

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aagtttaacc	cctgcaaata	ttatattgaa	gggaaatcat	ggtccaaaat	caagtcgcca	360
cccaagttaa	agtgcaatgt	aatcacttta	gcttg			395

<210> 415
 <211> 413
 <212> DNA
 <213> Pinus radiata

<400> 415						
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cagagaagaa	aatgcaatta	gcaaaggctc	taggtctgca	gccaaggcaa	attgcagtgt	300
ggtttcaaaa	caggagagca	agatggaaaa	ccaagcaact	agagaaggac	ttcaatatct	360
tcaagcacga	ctatgattct	ctgaagcaaa	attatgataa	tcttatggaa	gaa	413

<210> 416
 <211> 355
 <212> DNA
 <213> Pinus radiata

<400> 416						
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gttctctgcg	atgctgaagt	cgcccttatt	attttctcgg	aaactggcaa	gatcagcgag	180
tttgcaagcc	acaacgacat	ggcaacaata	ctggaaaaat	atcgcatata	cacgcaaaca	240
gaaacagatg	gaaacatggg	ggcttcgctg	gtccaaagcg	tgaagggttg	tgaatcacia	300
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<210> 417
 <211> 661
 <212> DNA
 <213> Pinus radiata

<400> 417						
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ccgtaatcgg	atgatacttc	tgggtttttct	gttgctgtca	tcgtgagaaa	gatttgcggt	180
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caaggggtag	ttgtctgtat	taaataaaaa	tggcgctccaa	tgggattatg	ttcaatgctt	420
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aagcagggga	tgaggatttg	ctggacgagt	gcgttcatca	gccaggaaag	aaaagaagac	600
tttcggtaga	gcaagttcgc	tttctggaaa	agagctttga	gttggaacaac	aagcttgagc	660
c						661

<210> 418
 <211> 323
 <212> DNA

<213> Pinus radiata

<400> 418

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gtttgagcat	tttctgcacc	cgtatccaac	tgatgcagat	aagcatatat	tggctaagca	180
aactggcctt	acaagaagtc	aggtatcaaa	ttggttttata	aatgccaggg	ttagactatg	240
gaagcccatg	gtggaggaga	tgtacatgga	agaactcaag	gaagaaaaag	tggaccaagg	300
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<210> 419

<211> 1571

<212> DNA

<213> Pinus radiata

<400> 419

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gaaagcattt	gctttctgct	gctgctgtga	tctattccta	tggtctgtat	tcgaatatga	180
tagattacct	ttactcatat	gaagcctctg	ctgctgctag	ttagtgattt	tatgtttcag	240
tatatatctt	attctgctca	tgccgggtat	tttatgctgt	ggatatggtc	tgggaattaa	300
gagtaaccga	ggctcaagag	gccgaagctc	ttagaatcct	gatattttaa	tgtttatctt	360
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gattttgtta	ttataaatca	agttttttta	tacatgatca	tgccaacagc	aaattgtaat	480
gagtcattgt	cctaattggtg	gccattctta	cagttttagt	gagccaggca	tccttcttgt	540
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agaattgagg	gcaacaatgg	aaacgaatct	cttaacgcag	caacaatcag	gttgccatga	660
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<210> 420

<211> 339

<212> DNA

<213> Pinus radiata

<400> 420

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ataagtacct	gtacaactca	cgcacaatct	ctgatataca	gttttgttgc	gaggggcacc	120
gtggtgcttg	cggagtacac	ggaattcaaa	ggcaatttta	caggtattgc	cgctcagtgt	180
ctgcaaaagc	ttcccgcag	caacaacaag	ttcacataca	attgcgataa	tcataccttc	240
aactaccttg	atgaagatgg	cttcgcataat	tgtgtgtgtg	cagatgaatc	cgttggaagg	300
caagtaccaa	tggcatttct	ggagcgtgtt	aaggaggat			339

<210> 421
<211> 332
<212> DNA
<213> Pinus radiata

<400> 421
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gactgggcag caaacgagga agaagaggag gctgagcttg cagcaggtga gatctctgga 120
gaaaaccttt gaggttgaga acaagcttga gccagaaagg aaattacaac ttgcacagga 180
attgggcctc cagcccagac aggttgctgt ttggttccag aataggcgtg ctgcgtggaa 240
aaccaagcag ctgcagagag attacggaca gcttaaactc aatttcgagt gccttaaactc 300
gaacttcgat gccatcaagc aggaaaacca ga 332

<210> 422
<211> 461
<212> DNA
<213> Pinus radiata

<400> 422
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ttgatattga agtgacatgg ccggcgagaa aagaaagatt aatagaatag ctaacgcttc 180
ggccaggcag gtcaccttcg cgaagaggcg gagggggctg ttcaaaaaag ctgaggagct 240
atcgatttta tgcgaagccg atgtagccct cctcgttttt tcttcaactg gaaagctgta 300
ccagtactcc agctccagca tgaaaatgat attggaccag tatattttgt attctagatc 360
aattcaaaag gatggaaagc caaatctgga ggagagtcac gatatccaaa agataaaaaca 420
acaaattaaa gatattagtc aaaatttgag aaaactgcgt g 461

<210> 423
<211> 622
<212> DNA
<213> Pinus radiata

<400> 423
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agggttgggt ctgggaatga gtattggcct tgggatgaat ctaatgagag aagaccttca 180
atctcacaga catcatgtca atggccctcc tgtgcagttg gatctgctgc ctttagctcc 240
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atcgctgctt catgtggact ccggtggcgc gatcaacgct gagagcagct gctacggcat 480
gagcgtcaag agagagcgcg aagccaccga ggaattggag gcggagagag cttgctctag 540
ggttagcgat gaagaagctg atcaggaggg cggcaccagg aagaaactca gattgtccaa 600
ggagcaatcg gctcttttgg ag 622

<210> 424
<211> 373
<212> DNA
<213> Pinus radiata

<400> 424
attcaaaatg ggaaagaagt tggagctgaa acgcatccaa aaccctaata gttcacgtga 60
ttccttctcc aaatgcaaga ggggactgct aaagaaatcg gtcaagctct ttgttctctg 120
tgatgctgaa gtttccctca tcattttatc tgaaaccgcc aagatttacg agtttgcaag 180
caacaagtcg tgactagctc ttgtgaattc ttctgatcaa gttagagatc catatactga 240
tatataaaaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300

tattatacct aaaggccatc agctgcaa at caagacccat tttctatctt ttgagatcgt 360
gatacagagt ctg 373

<210> 425
<211> 440
<212> DNA
<213> Pinus radiata

<400> 425
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ttcagaacat gaaagtcaaa ctgggtgttc ttggaattgt ctttgtgttg attcttataa 120
tctggctctc aatttgccat ggatttaagt gccattaatc ttgattactt ggcagtcctt 180
tctagataca atccttttca ggcatttata ttcatttttt ggcagcttgg cttataatag 240
atgcaggctc tctttgaaaa gagtatcttt tgtgttgtgt ctgagtaatg tatttcattc 300
acttgatac tgtcatcatt agatactgat tatctatgtt tttctctgac gagggacaat 360
gcctcgactc ttcatagttt aggttattgg cactacccat cagctgtgat gtcaatctct 420
tttataaata tgaatccctg 440

<210> 426
<211> 280
<212> DNA
<213> Pinus radiata

<400> 426
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gtggtcttgg ccgagtacac ccaattcacg ggcaatttca caacaattgc caatcaatgc 180
cttcagaaga ttcttgccag caataataag ttcacctaca attgcgatcg tcacacattc 240
aattatctcg tcgaagatgg ttcacatact gtgttgttgc 280

<210> 427
<211> 539
<212> DNA
<213> Pinus radiata

<400> 427
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acggcagatg acaagagact tcaaagtacc ttgaaaagaa taggcgtgaa taacatccct 180
gctattgaag aagtcaatat ttttaaggat gaccatgtta ttcattttgc taacccaaag 240
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cttcaagatc ttttccctgg tatcatcaat cagcttggac cagagagttt tgccaatctg 360
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gatgatgacg atgtaccaga gctcgttgaa ggtgagacat ttgaggaagc agctaagaaa 480
gactcctctt aaattttta atagatgagggg gcatgggatg tggaacaagc tagactgaa 539

<210> 428
<211> 1020
<212> DNA
<213> Pinus radiata

<400> 428
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accctagtct cgtggattct cgatcgaaat ctgcacggcc tgtatacagt cttagcacat 120
tactgagct gccatagggt tcttggaaact cttttttccg cggctcttgc gagtttcaca 180
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ctccccctcc	tgttgctgca	cccgcaatgg	atccccagca	gcagcaacag	caatggatga	360
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tttgcccccc	gcaacaccaa	ccccaacccc	agcatgccca	atcgagctt	atggctcagc	480
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ttgcaagcca	tgcaggagcg	gagagagctt	tgcaaactta	caatggtgca	cagatgccca	720
acactgaaca	attttacagg	ataaattggg	caacctttgg	cattggagaa	aagcggcctg	780
agattggacc	tgattatcct	atatttgttg	gagatttagc	atctgatgtg	acagactatt	840
tgttgcaaga	gacattccga	actagatacc	aaactgtaaa	aggagccaag	gttgttactg	900
ataggggttac	aggccgttca	aaaggatatg	ggtttgtaag	gtttggggat	gagaatgagc	960
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<210> 429

<211> 246

<212> DNA

<213> Pinus radiata

<400> 429

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ggagatttgg	ctccagatgt	cacagattat	ctgttacaag	agacgtttcg	atctcgatac	120
acatctgtga	gaggtgcaaa	agttgtaaca	gatccatcca	caggccgttc	aaaaggttat	180
ggatttggtta	agtttgctga	tgagaatgag	agaaatcgtg	ccatgactga	aatgaatggg	240
gtttat						246

<210> 430

<211> 323

<212> DNA

<213> Pinus radiata

<400> 430

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aatatagaag	gctggatgga	actatgtctg	taatagcacg	ggataaagct	gtgaatgatt	180
tcaagacact	ccctgaggta	actgttatga	taatgtcctt	gaaagctgca	agtcttggtc	240
tcaacatggg	tgctgcaagt	catgttcttc	tgcttgatct	ttgggtggaa	tccaacaac	300
tgaagaccaa	gctattgaca	ggg				323

<210> 431

<211> 414

<212> DNA

<213> Pinus radiata

<400> 431

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gttattgtaa	agaagtgata	gagatggaaa	tgggtcatgg	taatggagac	tgtaaagttt	300
aaactataaa	atgtaaagtt	gaattcctct	ctgatgttca	gtgtttactt	tttttgaatt	360
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<210> 432

<211> 525

<212> DNA

<213> Pinus radiata

<400> 432
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aaatatgcct tgggccagcc ccctccgagt ttgcagtctc tgggaaggga cgccgccctc 420
aaatatgcct tgggccagcc ccctccgagt ttgcagtctc tggaggggca cgccgccctc 480
aaatatgcat tgggccagcc ccctccgagt ttgcagtctc tgcaa 525

<210> 433
<211> 1196
<212> DNA
<213> Pinus radiata

<400> 433
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<210> 434
<211> 726
<212> DNA
<213> Pinus radiata

<400> 434
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ttcctg 726

<210> 435
 <211> 266
 <212> DNA
 <213> Pinus radiata

<400> 435
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 aaaacccgaa tctggctcgg ctccctt 266

<210> 436
 <211> 1775
 <212> DNA
 <213> Pinus radiata

<400> 436
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<210> 437
 <211> 585
 <212> DNA
 <213> Pinus radiata

<400> 437
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t c a g t g t c g a	t c t c a t c g a t	c a g a g t a g a c	c a c a a g t a t t	t c t g g t g t g a	a t c a c a t c g g	180
a g a t g g c a t t	c g c a g g a a c a	c a g c a g a a g t	g c a a g g c a t g	c g a g a a g a c g	g t g t a c g t g g	240
t g g a t c a g c t	c a c a g c c g a t	g g t t c a g t c t	t t c a c a a g g c	c t g c t t c c g c	t g c c a t c a t t	300
g c a a t g g c a c	c t t a a a g c t c	a g c a a c t a t t	c t t c t t t t g a	a g g g g t g c t g	t a c t g c a a a c	360
c t c a c t t c g a	t c a g c t c t t t	a a g a g g a c t g	g a a g t c t t g a	c a a a a g t t t t	g a a g g a a c t c	420
c c a a a g c t g t	g a a a a a t g a g	a a g t t g a a t g	a t g g t g a g a t	t a a g a c a c c c	a a c a g g g t c t	480
c t g c t t t g t t	t t c t g g c a c a	c a a g a g a a a t	g c c t t g c t t g	t g g a a a t a c a	g t t t a t c c c a	540
t t g a a a a g g t	t t c t g t g g a a	g g t g t g g g a t	a c c a c a a g g c	a t g c t		585

<210> 438

<211> 351

<212> DNA

<213> Pinus radiata

<400> 438

g t t t c g g c c t	t t g g a a g a g c	t t c t g a a t g a	t g t a a a t t g g	a g g t c c t g t t	g c c g g c t t a g	60
t c c a t g t a t t	g a t t t g g g t t	t t t t c a c t t t	t g g g t t t t t t	c g a t t t c t c t	g g g g t t t t a g	120
g g t a t g g a t g	g a t c t c a g a a	c a g c g g c g g c	a a t g c g g t g c	c t c c g t t t c t	a a c c a a g a c g	180
t a t g a c a t g g	t g g a c g a c a g	c t c c a c g g a c	t c g a t a g t t t	c a t g g a g c c c	c g g g a a t a a c	240
a g t t t c a t t g	t g t g g a a t c c	c c c g g a a t t t	g c a c g a g a c t	t g t t a c c c a a	g t a c t t t a a g	300
c a c a a c a a t t	t c t c c a g c t t	t g t c a g g c a g	c t c a a t a c a t	a t g g c t t c a g	g	351

<210> 439

<211> 292

<212> DNA

<213> Pinus radiata

<400> 439

c a t g a g a a g a	a g g c a g t a t t	g t g g a a c a t g	g a t a c t c t c a	a a g c t a a a g g	t t c c c t t g a a	60
g a g c a t t c c t	t t t t g a t c a c	t g a t g t g c g a	t t c a g t c c t a	a t t c a a c g c g	c t t g g c t a c a	120
t c c t c t t t t g	a c a g a a c a g t	c a a a g t c t g g	g a t g c a g a c a	a t c c a a a c t a	t a c c t t g c g t	180
a c t t t t t c t g	g t c a t a c t g g	g t c t g t a a t g	t c t c t t g a t t	t c c a c c c g a a	c a a t g a a g a t	240
c t t a t t t g c t	c t t g t g a c g g	g g a a a g t g a a	g t c c g t t a c t	g g a g t g t t a a	c c	292

<210> 440

<211> 352

<212> DNA

<213> Pinus radiata

<400> 440

a a t g g g c t a t	t t a c a g g a a c	t t g a a g a t c a	g a t a a t a g g c	c t t c a a a a t c	t t g t g a a a c g	60
g a a t g a a c g c	t t a t a t g g a t	c t g g a a a c a c	c c c t t c t g g a	g g a g t a g c t t	t a c c a t t t a t	120
c t t g g t t c a g	a c c c g t c c a c	a g g c a a c g g t	t g a a a t t g a a	a t c t c t g a a g	a c a t g c a g t t	180
a g t t c a c t t t	g a c t t c a a c a	g c a c a c c t t t	t g a g c t c c a t	g a t g a t g c a t	a t g t g c t c a a	240
a g c a a t g g g a	t t t t g t g a a a	a g c c a t t t a c	t g a t g g t a t g	g a t g t t a c t g	g c c a t g a t a g	300
t t t t g c a a a t	g g a a c t g g a t	t c g g a g a a a a	t a a c a t g a c t	a t a a c t a a c a	t g	352

<210> 441

<211> 441

<212> DNA

<213> Pinus radiata

<400> 441

g a c a a g a g t g	t t g c t g a t t g	a t g a c c a t c c	a c t g t t c c g g	g a g g g a c t g g	c a g g t g c g a t	60
c c a g g c c g a g	c c a g a t t t c g	a a g t c g t c g g	c c a g g c c g g g	a c c g t g g a c g	a g c t g c g c g g	120
g c t t g c g c c g	c a g a t c g a g c	c g g a c g t c g c	g a t c g t c g a c	c t g t t g a t g c	c g t c g g t c t c	180

cgggatcggc	gtcacccgcg	agctgtgcga	gctgctgcct	aggtgccgcg	tgctggggct	240
gtcggccgtg	gtcgacgccg	ccgcgatcgc	cgagatgctg	cgcgccgggtg	cgagcggggt	300
cgcgctgaag	accagccgg	cgccggacat	cctcgatgcg	gtccgccgca	ccgtggccgg	360
cgagagctac	ctgccgccga	gcgtgtcgcg	cgaggcgatc	gacgccgagc	tcgccggcgg	420
cgccccgcca	tcgctcgcgc	a				441

<210> 442
 <211> 1056
 <212> DNA
 <213> Pinus radiata

<400> 442						
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ccaggtaggt	cttcattcta	ttccttcaat	catggatccg	ccctactctc	agtaagctat	180
ataagatcat	tcattcattc	aatcaaatcc	attggagtgc	ctgttctggt	atacttcttt	240
gcattggagg	tcttgggggt	tgaccttact	cgttcgttcc	tcgaagccct	tgcccgcttc	300
ccattttacaa	taacttgtgt	tggtgcggat	ttgcacatgg	tgtatgctgc	cgaccagag	360
gaaccccgga	tcgtatatct	ttgtgactgt	aacaaaataa	ttcttgaggg	tttccgctac	420
ggcaagtttg	aggcttggga	ttttgaccca	gatctgtgtt	gctgtttgat	tcgcaagct	480
tggggagatc	aggatctgct	ctttgttgta	aatgtcgata	ttacccaaat	cagattccat	540
tcataattagg	gaagtatggg	ccgataatct	ggaagaggag	tttaatctga	tcagggaaat	600
tggtgatgac	taccctctga	tagccatgga	cacagagtcc	cctggcatag	ttgtgcgacc	660
cgtgggcaaa	ttcaggaccg	tccaagaata	caattatgaa	accctaaggt	caaagttaga	720
cgtattgaaa	ttaatacaat	tggggctgac	gttttctgat	gaagacggca	acctcccaaa	780
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gaacagcgaa	cggggcgtag	actctcacct	cttcgcagag	ttgctcatgt	cgtctgggat	960
cgtcttgaat	gagaacgttc	gatggatcac	cttccacagt	ggctatgatt	tcggttacct	1020
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<210> 443
 <211> 367
 <212> DNA
 <213> Pinus radiata

<400> 443						
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gggacgtcaa	caaagccgg	tggtgggcct	gttctatcgt	gtgggtcaacc	atgtggacgt	180
ctgctagggt	gcgaaaagca	tacttgcgag	caagagtgtc	accaggacc	ttgtccaccc	240
tgcgatatcg	tagatgttgc	aaagtgttat	tggtgtagac	aagaaagggg	gatggcatgc	300
gggacaggta	tagtcgagac	ctgtgtagta	gaaggagagg	gttcctggga	aggcagatgg	360
caatgcy						367

<210> 444
 <211> 553
 <212> DNA
 <213> Pinus radiata

<400> 444						
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tcaacaacct	tattccatga	aaggtaacta	ttacacacag	gcatatgggtg	gtgcagttgc	180
tagtcaggcc	ttccagtcag	acaatgatcc	aaataatata	actatatttg	ttgggtgggtt	240
agatccaaat	gcgacagatg	aagatctgag	gcagggttttt	gggcatatg	gagagattgt	300
gtatgtgaaa	ataccagtgg	gcaaaggatg	tggttttgtta	caattcacca	acaggtcctc	360

ttgaatcccg	gccaaatacc	gcggcgagg	acgaggacga	ccacactccg	gcctaaattc	180
gccgcctttt	ttataattaa	aaacataaaa	aggccgacgc	catgaacgaa	ccagacgagc	240
acgccgctgc	tcagctcgtg	cagaagcgta	gccacccgct	ggcggagggtg	gttatgccca	300
tctccgtccg	tccgctggcg	gagaaatgcg	gcgtggaggc	ggaggaggag	aggaagcggg	360
cggcggagca	caagaagcag	cggtccaaga	actggacgcg	agcggagacg	ctgaaactca	420
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ggcaggactt	cccgttcttt	gacgagctgg	acccgctgct	atctctcaag	cctcagaagg	660
cggcggcagc	ggccgcgcgt	gccgctaccg	ccgccacggc	ggcgaatttt	gtttccgccg	720
agactcccag	caatttttccg	actgacgacg	agatgacgga	agaaggggtcc	cctgctggga	780
agcggagaaa	aacgactcca	agaggcctct	cggcgacgga	cctggacgct	gttcgtgagc	840
tcttgagag	cctgggtgagt	cggcagcaga	ggtttttcgt	ggatctgctg	gattccatgg	900
agcggaaaga	ggaaatccgc	gagcggattc	gtcaagaaaa	ggagga		946

<210> 449

<211> 1140

<212> DNA

<213> Pinus radiata

<400> 449

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aaaggcgtct	ggatggagggt	ccagattatt	ctatttttgt	gggagatttg	gattcagatg	180
tctcagattt	ggtcttgtag	gagactttcc	aaactcgata	tccatcagtg	aaagctgcta	240
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aggagagtga	gagggcccga	gccatgacag	aatgaatgg	tgtatattgt	tctactagac	360
ctatgcgaat	cagtgcagcc	accccaagga	agtctgcagg	agttcagcaa	cagtattcag	420
gaagagcagg	caatggtgga	tctcatgccc	aaggattccc	gtcagacaat	gataaacaat	480
acaactatat	ttgtgggacg	gctagatcca	aatgctacag	atgaagatct	gagacaagtc	540
tttgccagtg	atggtgatct	tgtgtccatc	aaaatacctg	ttggtaaagg	ttgtggattt	600
gtccagtttg	cgaacagggc	ttgtgctgag	gaagcattgc	aaaggctcca	tggtagtgtt	660
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aagcttggtc	acactaatgt	tgcaagggct	gtttatttgc	ccttcaagtt	ggcttcattt	960
gttttcagtc	tggaggctgc	aattgttttg	ttttctttac	caggtatagc	aacgtatttg	1020
ctagttgtgt	aagcacataa	aaattattgc	ttcatattca	ggttttcatt	atctgagatc	1080
aacatatatt	ttccctagtt	atattacata	tttccttata	attttaaaaa	aaaaaaaaaa	1140

<210> 450

<211> 390

<212> DNA

<213> Pinus radiata

<400> 450

acatcatacc	accgaccttg	cttcaagtgc	tgtcatgggtg	gttggtgtcat	cagccccctca	60
aattatgttg	ctcatgaagg	caggctatat	tgtaggcatc	atagctctca	acttttttagg	120
gagaaaggta	acttcagcca	gctttcaaag	gcaacaccta	caaaaggggt	gactgagaac	180
tcagacacag	acgacaagtg	atcattccgg	ccagattttt	gttgagagag	ttgtagtgtg	240
taattgattc	atttcataca	tttgatatgc	aagcctgtat	caagcttatc	gataccgtcg	300
acctcgaggg	ggggcccggg	acccaattcg	ccctatagtg	agtcgtatta	cgcgcgctca	360
ctggccgtcg	ttttacaacg	tcgtgactgg				390

<210> 451

<211> 460

<212> DNA

<213> Pinus radiata

<400> 451

gagtaggagg	cggcggcgga	ggcaagggaa	gcccgtacag	aggcgtcagg	atgagaaaat	60
ggggaaaatg	ggtttctgaa	gtgagggagc	cgaacaagcg	gtctcgcata	tggctcggct	120
cctattccac	tcccagaggcc	gctgccaggg	cctatgatac	tgccgttttc	tacctcagag	180
gaccctccgc	gactctcaat	ttccccgagg	aagcacgtaa	ggagcagcag	agcgacctca	240
ggcttttcga	gctcggggag	ctctcaccgt	cctctattca	gcggagagcg	gccgaggtcg	300
gcgcggccgt	cgacctgccc	atgcaggcgg	gcccggttcc	tgctcagacc	ctgagggaaa	360
taaaccaaga	aaatgatatg	aagaacgcct	tgagctcaaa	attgagcgag	ggcaataatt	420
tcaagatcga	agcaaaaaat	aatatgaggc	agcagggtt			460

<210> 452

<211> 1116

<212> DNA

<213> Pinus radiata

<400> 452

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ccgaagcttt	gagaggttga	aattcagact	tttgctccga	actgttctgc	tgaacaaaaa	120
tccagtattg	agctaggttt	agaatcgggt	ttgctgggtca	tctgggagag	gcgatccatt	180
cagcttcgca	ggcccccgaa	gatggcgttc	gccggcacaa	cccagaagtg	caaggcatgt	240
gaaaagacgg	tctatttggg	tgatcaattg	acagctgata	attctgtttt	tcacaaatcc	300
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cagcttttcaa	aggcaacacc	tacaaaaggg	gtgactgaga	actcagacac	agacgacaag	780
tgatcattcg	ggccagattt	ttggtgagag	agttgtagt	tgtaattgat	tcatttcata	840
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tggttgctatt	tgggtttccg	gtgtgttcat	tttcacttat	ttttgtgttt	tagctggaag	960
aatttgagag	ggtagaattg	tgtcatcgct	atggcttggt	catgactcat	gagccagcag	1020
ttgagacttt	tatttattag	ttatagtact	atatctagtc	gagttctcaa	taaaagatag	1080
tgttatgctg	ttgggcagca	aaaaaaaaaa	aaaaaa			1116

<210> 453

<211> 439

<212> DNA

<213> Pinus radiata

<400> 453

ccggttcccta	gttcgaatcc	ttgccctaac	gcagtcgccgt	gttttaagac	tcaatcttta	60
gtgactcccc	cgcaacatgg	ttaagccctt	gccaaaacag	agcagcccga	gcggatcgga	120
aaactgccaa	ataaagtcgc	ggcagttcaa	aggaatccga	ctgagaaaat	gggggaaatg	180
ggtgtcgga	attagaatgc	cgaattccag	ggccaaaatc	tggtggggct	cctacgactc	240
cccggaaaaa	gctgcccgcg	cctacgactt	tgctgtgtac	tgtctaagag	ggtcgaaggc	300
cacattcaat	tttcccgact	ccccgccgga	aattccatgc	gcctctgacc	tgtcgccgcc	360
gcaaattcaa	gccgcccgcg	ccaggttcgc	tacagaagat	ttccggctgc	cgtcggaaga	420
ggacgcggcg	tcctcctct					439

<210> 454

<211> 481

<212> DNA

[illegible]

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ggacattgct	cgcgcacacg	aagatcgcgt	gtcccgccaa	tttaaaggag	tccgaccgcg	180
taaatggggg	atatgggtat	cggaaatccg	gatgccgaga	tctcgacaga	aaatatggct	240
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ttcaagcccg	ccgtctctga	acaataataa	agaggaaccc	gcgtcaccgt	cgcagtcgtc	480
t						481

<213> Pinus radiata

ctcccacctc	catttcactc	tgccgagtcc	attactctcc	ctatcgtcga	accacgtctt	60
tctcatcgac	caacaatgac	tcagcagaca	acctcaccaa	cagttagtcc	cgccgcactt	120
gctcttccca	cttctgcttc	atccacatct	gcaaagtctg	cagctgttcc	agtaccagcc	180
caagccaacc	ctcgcaaacg	tctctgttcg	gatctctccg	cagaggagaa	gcgagaggct	240
cgtgctcatc	ggaacagaat	cgcagctcag	aactctctg	acaaacgcaa	acagcagttc	300
actagtctcg	aacaacgagt	catcgacctc	gagaacgaga	accgccaatt	acgagacgct	360
ctcgccactt	cgcagccgaa	cc				382

<213> Pinus radiata

aacttctgac	tatttttgaa	gctgtatatg	tacataaagg	gatcgttaat	gcagcgaaag	60
tgcttaatact	gacccccctcg	gcaatcagtc	agtctattca	gaaactgcgc	gttatattcc	120
ctgacccatt	gtttattcgc	aaaggccagg	gtgtcactcc	taccgcattt	gcgatgcac	180
tacatgagta	tatcagtcag	g				201

<213> Pinus radiata

gctctgggga	cttggtgttt	tctcccaatc	ctaaaactaa	atgttattat	ctgaaatagg	60
gaaacaagat	tacagcagca	gcgaaggaca	aatgaaaggg	ccgcagggga	ttagcaatgc	120
tcaaaacact	tgtaccaa	tccgaatgcc	aacatcagag	aacttgattc	ccattcgcct	180
tgatattgaa	attgatggac	tacgtttgaa	ggatgcattt	acgtggaatg	taaatgatcc	240
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tttcataaga	ccagtagtac	aatctattca	agcacagtta	gcagagtttc	ggtcatttga	360
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atatatatcc	tcctt					435

<213> Pinus radiata

<400> 458
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ggtttctagt gcggctcgtct atatttttcta ctctcctttc cactctgcaa aatcagacct 120
tcatccattc cccacggcat tagattcaat ccattctatt aggctccttt aagcgaggctc 180
gcgggttcga acccgatcga atgatgcgaa ttggataccg tttgggtgtag aattctgata 240
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cgaagacgta tgatatggtg gacgaccggg ccacgaatgc tatggtgtca tggagccccg 360
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actttaagca cagcaacttc tccagcttcg tcaggcagct gaatacatat ggttttcaca 480
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tggtgaaaaa cattcacagg cgcaagcctg ttcatagccca cagtcagcag aaaggagaga 600
gtttgtctggt aggatcatgt gtggaaatca aacaacttga agatgagact gaga 654

<210> 459

<211> 675

<212> DNA

<213> Pinus radiata

<400> 459
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gggtcgaaac cctctgggtc ccagagatca gcccatgaaa cttcatggca gcagcctatc 180
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<210> 460

<211> 1014

<212> DNA

<213> Pinus radiata

<400> 460
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<210> 461
 <211> 301
 <212> DNA
 <213> Pinus radiata

<400> 461
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 tgcataaaaag gaaaggggtg tcttgataat ggacgttgca actatagagg agtcaggcag 180
 agaacgtggg gaaaatgggt tgcggaaatc agagaaccga atcgtggaag tgcactgtgg 240
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 a 301

<210> 462
 <211> 384
 <212> DNA
 <213> Pinus radiata

<400> 462
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 tctgtgaacc agagatgctc aggatcttct agttgaatgc tgtgtagagt tcatcaattt 180
 aatctcgtca gagtccaatg acatatgcta caaagaggag aaaagaacta ttgcaccaga 240
 acatgttctg gaatctctaa agattcttgg ctttgggagc tatattaggg aggttaaagc 300
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<210> 463
 <211> 484
 <212> DNA
 <213> Pinus radiata

<400> 463
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 agcaatggat agtctaata tgcagcaact gcctacctc ctccaatatt gcaaagatct 180
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 aggttcaaaa atacgtgccc tcagggagga agaaataaca tatcttgaca aactggaaac 360
 tgagtgcagg gagcagcttt ctagtctcca aagggatgag gaaatgaagg aggctaagat 420
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<210> 464
 <211> 1434
 <212> DNA
 <213> Pinus radiata

<400> 464
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 aggaccctgc cctgctattt ggccttgtga gcgattcagg agaaatgggg tggcaacagc 180
 agcaaggagg agagaatgaa aattgaataa aacgaaggat ctgaatcccc cttgcgcgca 240
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<210> 465
 <211> 364
 <212> DNA
 <213> Pinus radiata

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120	180	240	300	360	364		

<210> 466
 <211> 237
 <212> DNA
 <213> Pinus radiata

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agaggcactg	ggcttggcac	aattgagagg	ccagccctaa	237
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<210> 467
 <211> 578
 <212> DNA
 <213> Pinus radiata

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agacacagca	aggcgaggca	ctctgatatt	aagcaaagag	agagaaagag	tctaaatgac	tatttgtgac	tgaggagcat	aaatctgttg	360
120	180	240	300	360	420	480	540		

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578

<210> 468

<211> 432

<212> DNA

<213> Pinus radiata

<400> 468

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ggctgttcat	gc					432

<210> 469

<211> 657

<212> DNA

<213> Pinus radiata

<400> 469

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cctcgccgtc	ctctcatca	tctctgcaca	ataatcagag	cagtagccaa	aacagcagca	420
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cccgggtccg	gcgcccggcg	agtctttcgg	agaaaaacag	cggcagaaaa	gctgaaggcg	600
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<210> 470

<211> 581

<212> DNA

<213> Pinus radiata

<400> 470

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aatgggacaa	tgatggggca	gggtaatgga	acaatgatgg	ggcagggtaa	cggggcaatg	180
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ggtggagaaa	gtagttgaaa	gaaggcagag	acgtatgata	aagaatagag	aatcggcagc	540
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<210> 471

<211> 451

<212> DNA

<213> Pinus radiata

<400> 471
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 aatatttgat ccacatggat atgatccgag tgactattac gatgctttag ctttgaggct 300
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 ggggtggtcaa aagggtgctg ttgttggggt a 451

<210> 472
 <211> 1286
 <212> DNA
 <213> Pinus radiata

<400> 472
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<210> 473
 <211> 1358
 <212> DNA
 <213> Pinus radiata

<400> 473
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<210> 474

<211> 517

<212> DNA

<213> Pinus radiata

<400> 474

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taccaagca	agagaactgt	tcagaggctg	gggaaactga	gtagacagac	agtcagattg	480
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<210> 475

<211> 337

<212> DNA

<213> Pinus radiata

<400> 475

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aagttgaacc	agagggttta	cgcactccgc	gctgtggttc	ccaatgtgtc	caagatggat	300
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<210> 476

<211> 362

<212> DNA

<213> Pinus radiata

<400> 476

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ac						362

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<211> 612

<400> 480
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ttaaagtaaa actatcaggg gcatcttggt attatgatac agttcaaatt ttgtttttcc 720
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tccccctcc agtgtatggt taaaatgttg tagtacaac aatgtcccca attagctgct 900
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aaaaaaaaa a 971

<210> 481
<211> 710
<212> DNA
<213> Pinus radiata

<400> 481
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tcccagagag aaatgaaaat gaatctcgac cttttgtaga agagtttctt atatctgacc 180
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gaacttatca ttgatcccat ggagaacaaa acagatcaaa tagtagccgg gcagaaacga 360
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gcttgccaga cttttcctgt ttcattcctc gaaggtgaat gaacaatacc ctcaatcttg 480
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accaggaacg ttttccttca caagagggaa ttagctggaa gagagatgat gaactccac 600
agccacagaa tccacaaaa aagaaacgtt atagaggggt aaggcaaaga ccgtggggaa 660
aatgggcccgc agagattcgt gatcctaaga aggcagctcg agtatgggtg 710

<210> 482
<211> 1240
<212> DNA
<213> Pinus radiata

<400> 482
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tatggcttat gctgaaaatt tgaggaattt tggttttggg gccataatg gtggttctaa 180
tcagagcaat agcagtaatg ggggtgtaga tggctattct tcgatgtcca atgagggagg 240
gcttggttatg ggacagattg gcggtccaca tggctaccgc aattcttcac caagtgtca 300
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gatcggggag cgggtgtttt atttcccaca aggtcatatg gagcaggttg aagcatccac 420
aaaccagggg gctgatcagc acatgccatt gtttaacctg ccctataaga tcttttgccg 480
cgtaatcaat gttcaactga aggtgaacc tgatacagat gaagtgtttt ctcaaattac 540
cttgctccca gaggcagagc aggatgagtc gtctgttgag aaggagcctc taaccctact 600
gcctccaaag cttttagtat actctttctg taagaccctc actgcatcag ataccagtac 660
ccatggaggg ttttctgttc tcaggagaca tgctgatgaa tgtcttccac ctctggatat 720
gagtcagcaa cctccatctc aagatctggg ggccaaggac ttgcatggag ttgaatggcg 780

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aacgaagacc	atgttttagt	tctattataa	accaaggaca	agcccatcag	agttcataat	1080
tccttatgat	caatatatgg	agtcaatgaa	aatcaatttc	tcggttgga	tgagattcaa	1140
gatgaagttt	gagggggaag	aagtcccaga	gcaaagattt	actggaacca	ttgttggaat	1200
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<210> 483
 <211> 516
 <212> DNA
 <213> Pinus radiata

<400> 483						
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gggtggttact	atcttaggatc	ggacattagg	cgttgtggtc	tcgggttcga	ttcacaaggc	120
atcttctgttt	cgaattttca	aagcaacacg	tatcagaaaa	ctgattctat	actgtgatga	180
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ggaggggacc	ttggactgtt	gatgaggaca	tgagccttat	tcgatgcgta	accacccggg	300
gtgaaggctcg	atggaacaca	gtagccaaat	ttgcagggtc	aaagagaaca	ggaaagagct	360
gcagattgag	atggcttaat	tatcttcggc	ccgatgttaa	acgtggaaac	ataacgccgg	420
aagagcagct	attaatcctt	gaactccacc	gtctctgggg	taacagatgg	tccaagattg	480
cacggcaact	cccaggcagg	actgacaacg	aatca			516

<210> 484
 <211> 328
 <212> DNA
 <213> Pinus radiata

<400> 484						
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agtattgttt	tcagtaattc	ccttaattgg	gtcccagaat	acgttctcag	atccgaaaac	120
gggttcagtc	atcggagggt	acagcgattc	gaaggcctga	aaaccctaaa	aatacctatc	180
cccctttgtc	tttgaatggc	ggagaactat	ggcagcccgg	atagcagccc	ccggtcggag	240
aacgaatccg	gcggcggtca	catgggcggc	agcgatttct	ctgtgaaaga	gcaggatcgg	300
ttcctgccta	tagccaacgt	ggggcgca				328

<210> 485
 <211> 919
 <212> DNA
 <213> Pinus radiata

<400> 485						
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atgcttgaag	gctatgccta	tgcttgccga	aacataccgt	gacagctttg	agacgacttc	120
gggaggtagc	agcgtggatc	tggtagggaat	ggctctacca	ggtttgccc	ctaatttgct	180
ttctgcttca	gtttcagctt	cagcgtcgga	agattctgcc	aagaaaataa	ggaaacccta	240
taccatcacc	aagtccagag	agagctggtc	tgagcaagag	cacgataaat	ttctcgaagc	300
ccttcaacta	tttgatcgtg	attggaaaaa	gattgaagct	tttgtaggat	caaagactgt	360
catacagatt	cggagtcatg	cacaaaagta	cttcttgaag	gtccaaaaga	atggcacaag	420
agaacatgta	ccacctctc	gtccaaaacg	caaagcatct	catccatacc	cacagaaggc	480
ctcaaaaaat	gttctgtgt	cacagcaagt	atcaactgct	tttccaactg	ctgctactca	540
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gtcatgccca	actgtttctt	cctgggttca	tcataccata	ccatcaatag	atgcttcgtt	660
tgtggaaaaa	gatgatgggt	ggcctccagg	cattgaaaca	gggaataatt	gcagtagtgg	720
tagcactgag	agttctcctc	ctacgtggcc	accctgttct	gaaatccctg	agaaagtcaa	780

accagat	tttt	tcacaag	ttt	ataag	ttcat	tggcag	tgtc	tttgac	ccga	gcaca	actga	840
tcactt	gaag	aagctt	aagg	aatgg	atcca	attgat	cctg	aaact	gtgt	gtaccc	atga	900
ggaac	cttt	cacaac	ttg									919

<210> 486
 <211> 359
 <212> DNA
 <213> Pinus radiata

<400> 486												
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agtt	gtt	gga	gctgtt	caaa	agata	aatgg	c	cagag	cgtc	ttaat	cgtgg	120
gctg	aggag	g	ataca	at	gag	tgaac	at	caaaa	actc	atgg	agttgg	180
tctct	tccca	agaa	agcag	tctaaa	acga	tctgg	gaaga	g	ttgcag	att	acgtt	240
aact	atctt	c	gttcag	atat	caag	catgga	aacatt	ttctc	cgga	agaaga	ggaact	300
atcag	attac	atcgt	ctcct	tggc	aatcgt	tgg	tcgttga	tagc	aggacg	actt	ccagg	359

<210> 487
 <211> 438
 <212> DNA
 <213> Pinus radiata

<400> 487												
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tttga	agggt	gtcgc	agcag	aaga	agatcg	gattc	ggttca	tcct	catcac	aaaga	atata	120
ccatg	gggg	cattac	cccat	gtaaa	agaaa	agta	agagat	ggat	cgggat	aagct	tatga	180
agatg	gctg	tgcag	ttcgt	actg	gtggaa	agggt	acagt	acgc	agaaag	aagaa	agcag	240
ttcac	agagc	caca	acaaca	gatga	caaaa	ggct	ccaaag	tac	cttgaag	agg	ttaggag	300
tgaat	actat	tcct	gctatt	gaaga	agtaa	atatt	tttcaa	ggat	gagatg	gtcatt	catt	360
ttata	aaacc	aaaag	ttcaa	gcct	ctatta	atg	ccaatac	atg	gggtgg	tc	agtggat	420
cccag	acaaa	aaatt	tac									438

<210> 488
 <211> 478
 <212> DNA
 <213> Pinus radiata

<400> 488												
agaat	tttag	tagg	gtttta	agga	agaaa	acgat	ccaag	cagt	gggtt	ttat	cgagct	60
cccac	gcag	ttga	agggtg	tcgc	agcaga	aga	agatcgg	attc	gttcat	cct	catcaca	120
aaag	atggat	cggg	ataagc	ttat	gaagat	ggct	ggtgca	gtt	cgtactg	gtgg	aaagg	180
tacag	tacgc	agaa	agaaga	aag	cagttca	cagag	ccaca	aca	acagatg	acaaa	aggct	240
ccaa	agtacc	ttga	agaggt	tagg	agtga	tact	attcct	gct	attgaag	aag	taa	300
ttt	caaggat	gagat	ggtca	ttc	at	ttt	at	aa	cccaaaa	gtt	caagcct	360
caata	catg	gtg	gtcag	t	gatct	cccc	a	gac	aaaaaat	ttaca	agatc	420
aat	catcaat	cag	cttggac	ctga	taattt	gatta	atttg	aaga	agattg	ccca	acag	478

<210> 489
 <211> 608
 <212> DNA
 <213> Pinus radiata

<400> 489												
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aatt	ttagca	ggag	gagctg	atag	agtgtt	attat	cggga	cggat	gaaat	aatt	gaagcc	180
aaag	ggctt	atgt	gtgtgt	ttt	gcggact	tct	gcagta	aggg	gaaatg	gaatt	atttgg	240

agtgaagtag	gtgttcttgg	agaaatatgc	gggcagctca	taataacagc	aataatagtg	300
agaaatcttg	cgtgttgaga	tctctctgag	cttcgctttt	cagaatgagg	accggcttct	360
cccagcagca	tcggaagg	gaaaagagga	gtctcaattc	agagctatgg	catgcatgtg	420
ctgggccact	tgtgtcccta	cctgctgttg	ggagccgtgt	tgtatatttt	cctcaaggtc	480
acagtgagca	ggtggctgcc	tcaacaaaca	agaggttgat	gctcacattc	ctaactatcc	540
aaatcttcca	ccacaattaa	tctgccacta	cacaatgtta	ctctgcaggc	agatgtggag	600
acagatga						608

<210> 490
 <211> 331
 <212> DNA
 <213> Pinus radiata

<400> 490						
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agtaagctat	agattgatag	ttcagagaaa	agactgaaag	gcaaaaacta	tatagacata	120
acaacggaga	gagcagcaca	ggaaccaggt	tgcataatgg	ctaggcctca	aagatacaga	180
ggagtccgtc	agaggcactg	gggatcatgg	gtctctgaaa	tccgccatcc	cttattgaag	240
accagaatat	ggctaggaac	atgtgaaaca	gcagaggatg	cagcacgagc	atatgatgaa	300
gctgcaagga	tgatgtgtgg	gccgagagct	a			331

<210> 491
 <211> 431
 <212> DNA
 <213> Pinus radiata

<400> 491						
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tcttctgtta	agatgggtgag	atctccctgc	tgcgacaagg	ttcataccaa	taacaaaggc	120
gcctggacca	aagaagaaga	cgagcgtctc	atagcacaca	ttgaagccca	cggcgagggc	180
tcatggcggt	ctcttcccaa	ggcgcaggg	ctgctgcgat	gtgggaagag	ctgcagggtg	240
cgatggataa	actacctgcg	tcctgatctg	aaacgcggaa	gcttttcaga	agaagaagac	300
gatctcatca	tcaaaactcca	ctccctcctc	ggcaacaagt	ggtcgcttat	tgcaggggaga	360
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ttgttgagca	g					431

<210> 492
 <211> 469
 <212> DNA
 <213> Pinus radiata

<400> 492						
gccagagctg	tggtgtttcc	cagaagagga	tatcatcagc	tgtccagttt	gtcctaagag	60
actacagaag	aagaatatag	aagatgggta	gatccccctg	cccccaaaa	gaagcgctta	120
accgtggggc	ttggacaggc	atggaggata	cgattctcac	cgagtacatt	cgagttcatg	180
gcagtgggtg	ctggaaagat	atctccaaaa	gagcaggtct	taagaggtgt	gcaaagagtt	240
gcagattgcg	ttggctgaac	tatcttcgtc	ccgatattaa	acgtggtaac	atcttcccgc	300
aggaagaaga	gtcattattt	cgggttgcac	gccttcttgg	aaatcggtgg	tctctgatag	360
caggacgact	gcctggctga	acagacaacg	aaatcaagaa	ttactggaac	actcatatga	420
gcaagaagcc	atggctgtca	atggacgaat	ctcagtccaa	tacttcgca		469

<210> 493
 <211> 380
 <212> DNA
 <213> Pinus radiata

<400> 493

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gacgaaaggt	catgggaaac	cttgaggag	gacgaggagg	gtcttctcaa	ctttgacaag	120
aaacagcagc	aacagcaaca	gcgccaatac	agacgccgct	tgcagtctgc	tgcagccgcg	180
gcttcaaaca	ttcagcgagg	attgatccgt	tatctctaca	tcatcatcga	cttctctcgg	240
gcggcagcag	agaaggattt	caaaccaa	cgaatggtgg	tggttgcaaa	ttgtgtcgag	300
gcatttgtga	gagaattctt	tgatcagaat	ccactaagtc	agctgggtat	tgttattata	360
aaaaatggcg	ttgcacatcg					380

<210> 494
 <211> 420
 <212> DNA
 <213> Pinus radiata

<400> 494						
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atgaagcact	cggtgcatat	attcaagccc	atggagaagg	cagttggcgt	tccttccca	120
aggccgctgg	gttgcagcgg	tgtggcaaaa	gctgcaggct	tagatggata	aattatctcc	180
gtcctgacct	caaacggggc	aatttcagcc	cagaagaaga	tgagatcatt	atcaaacttc	240
attctatgtt	gggtaacaag	tggtctttga	tcgcaagcaa	attgccaggg	cgaacagata	300
atgagataaa	gaattactgg	aacactcaca	ttaagagaaa	aatgttagaa	aggggtctag	360
atccttctac	ccatctccct	ttaatgtcag	accatggctc	ttttgagtc	tccagcaaga	420

<210> 495
 <211> 568
 <212> DNA
 <213> Pinus radiata

<400> 495						
aaaagttgtt	cctccactgg	atttcaactca	gcagccacct	gcccaggagc	tgactgccag	60
ggatcttcat	gacaatgaat	ggaaatttctg	gcatattttt	cggggtcagc	ctaagaggca	120
tctgtctaca	acaggatgga	gtgtttttgt	cagtgcgaag	agacttgagc	ctgggtgattc	180
tggtgtcttt	atttggaatg	agaaaggaca	actgttggtg	ggaattagac	gagcaaacag	240
gccacaggct	gtaatgccct	cattgggtact	ctcgagtgat	agcatgcata	tagggctcct	300
tgctgaggct	gctcatgctg	ctgtacaaa	tagtcgattt	actattttct	ataatccaag	360
ggcaagtcca	tctgaatttg	tcatacctct	ggcaaagtat	gttaaagcag	tttatcatac	420
tcgtgtttct	ataggaatgc	gttttagaat	gctatttgag	acagaagagt	cgagtgttcg	480
cagatatatg	ggcaccataa	ctggcataag	tgacttggat	caggttcgat	ggccaaattc	540
acattggcgt	tctgttaagg	ttggttgg				568

<210> 496
 <211> 396
 <212> DNA
 <213> Pinus radiata

<400> 496						
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agaagaaaaa	gcgtccagca	atcttcagca	gcccctgcta	gcagatgcgt	ttcgccggctc	120
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gcggcgttag	ttaattgttg	tcaaaatagc	acatccgggc	tccatggtga	aaatgaaaaa	240
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gatctcctcc	tgtttctgtc	aaagtgtgta	aacattaccc	cggacaacct	cagcaatatc	360
ctgatagccg	cttctcaaac	gaattgccgc	gatgaa			396

<210> 497
 <211> 643
 <212> DNA
 <213> Pinus radiata

<400> 497
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 tgttaaacag aagaacttga aggatgggga ccaattcacc agtagtgatg aagctgacag 120
 tgagggtcaat gaattcaaca ttatgaaaag aagcaattca ggggttggat atgaagataa 180
 caaaagaagt ggggggcaag gtgatggcaa tcagtacagg tcacgtcact ctcggagcat 240
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 gtctcaaggt cggaatgtca gacactccca tagcaattcg atggatggaa gtacaaattt 360
 caatgtggaa ttcgggaatg ggggaattcag tgcactctgag atgaagaaga tcatggccag 420
 tgagaaactg gcagagcttg caacgggtgga tccaaaacgt gtcaaaagga tattggctaa 480
 tcgccagtcg gctgcacgct ccaaggaaaag aaagatgcgc tatatctcag agctggaacg 540
 caaagtccag accttgcaaa ctgagggaac aactttgtcc gcacagctga ctcttttgca 600
 gagggatcaa ctggactggg cagtcagaac cagcagctca agt 643

<210> 498
 <211> 328
 <212> DNA
 <213> Pinus radiata

<400> 498
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 aatattttgc ttgtaggtcg aggcggcacg aatccgggtc aactgaggat acattctgga 120
 ggtatagtgt ggagaaggca ggggtggaggc aagggtggtt atgtggcgaa aaacgaagtc 180
 aagagtttga gttggactcg agttcccagg gggttatcaac tcggtgtcaa gcttaaagct 240
 ggggttgaaca tcaagcttgc gggatttcgt gaacaggatg tcggcaattt gacaaatttc 300
 atgacaaaca caataggatt agtcccca 328

<210> 499
 <211> 372
 <212> DNA
 <213> Pinus radiata

<400> 499
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 tgggtggagag agcagtcctc attctgacat agagtctacc ggcattccaca ataattggtc 120
 ttcttcttcc tcacaatcca tcatacgaga gcaagaccgg ctgcttccca tagccaatgt 180
 ggggcgcac atgaagaaaa cctcccaac caacgccaa atctccaagg aagccaagga 240
 aatcatgcaa gaatgcgtct ccgagttcat tagctttgtt actggagaag catccgacaa 300
 gtgtcacaag gaaaagcgca agaccatcaa cggcgatgac atactatggg ccatgaccac 360
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<210> 500
 <211> 344
 <212> DNA
 <213> Pinus radiata

<400> 500
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 gaaaataatg aacttaggag atgcacatgg caccagtggg gttgctgccg ttctcgagaa 120
 ttcggatgat gaagctgtgg atccacatct tgaacgtatc aaaagtgcac gtgaaggcgg 180
 tgctggagaa gatagtgatg aagaggcatg ctacactggg gacttatctc tgatatgtgc 240
 tgtagtcaaa gaactaatat gcacacatga ttaacaagag ttaaatacaag agactgatgt 300
 ctgtttctgt tttgtttgtg tgcaggatga ggattttgtt gcag 344

<210> 501
 <211> 462
 <212> DNA

<213> Pinus radiata

<400> 501

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gatggggtgt	gtgtcgtcca	aggtggagaa	tgaagaatta	gtgaaaagat	gcagggacag	120
gaggaggcta	atgaagcagg	cagtgaattc	caggcacaat	tttgctgcag	cccacattgc	180
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attggtgcct	agcagcccct	ccgtgagtc	cagcatggag	agctttcgta	tgccatccaa	420
acacaatccc	ctcagtaggt	ctacttcaga	cattagctat	gt		462

<210> 502

<211> 504

<212> DNA

<213> Pinus radiata

<400> 502

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tgggtcgtgc	tccatgctgc	acaaaagttg	gtctcaacaa	gggagcatgg	tctgccgaag	120
aggatagtct	tctgggaaga	tatatccaaa	ctcatggtga	aggcaattgg	aggtctctgc	180
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ttcggccatg	tatcaagcgg	ggaaatatta	caacagatga	agaagaactt	attatcagaa	300
tgcatgctct	cttgggcaac	cgatgggtcga	taatagcagg	gagagtcccc	ggccgaacag	360
acaacgaaat	aaagaactac	tggaaacta	acttgagcaa	gaaacttgct	gtcaggggaa	420
tcgatcccaa	gactcataaa	aaaatcacga	cggacggcac	gaacagagtc	aacggtgatc	480
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<210> 503

<211> 416

<212> DNA

<213> Pinus radiata

<400> 503

acggcaactc	attcgtgaac	tagaacagat	gtttaacatt	gaaggagAAC	ttgaggatcc	60
aagcaaaggt	tggcaggttg	tataactga	caatgaagg	gatatgatgc	ttgttgagaa	120
tgatccatgg	caagagttct	gtagcattgt	gcggaaaatt	tacatttata	cgcgtgaaga	180
ggttgaaaaa	atgacccac	aaaccccaag	tgcaactca	agggatgttc	agaagagcct	240
gtcacaagag	gaaacttccc	ggagttctga	tcgtcaagat	tcataaattg	cggggggtcac	300
cgctgaaagg	agttctgatg	cctgatacca	tttcaatctg	catgttggtc	acttctgtcg	360
ggcctgctaa	aggggcatca	aagggcattgt	tttagttggc	cgtttgatgc	cttggg	416

<210> 504

<211> 1206

<212> DNA

<213> Pinus radiata

<400> 504

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tctggttcag	aaatggcgga	ctaaagtaat	agtgtgcccc	gaggtctggg	gttcgaatct	120
cgttggcggtg	aaaggtcaaa	tttttctctc	gagtttcatt	gattctgaaa	aactggcata	180
gctatggcga	tgagcaatgg	gagattgtgt	gaagatttgg	ataggattaa	ggggccgtgg	240
agccccgagg	aggacgcgtc	gctgcagagg	cttggttcaga	aatacgggcc	gaggaactgg	300
accctgataa	gtaaaggaat	cccggggcga	tccgggaaat	cgtgcaggct	acggtgggtgc	360
aatcagctga	gccctcaggt	ggagcacaga	ccttttaccc	cgtccgagga	tgctgctatt	420
ctgcaggccc	acgcgcagca	cggcaacaaa	tgggcaacaa	ttgcccagagc	cctccccggc	480
cgcaccgaca	acgcgatcaa	gaaccactgg	aactccacgc	tacggaggcg	ctgccgggac	540

cccaaaaagg	gcatcggtgt	ccacctggac	gacgaaatca	gcagcttaga	cgccgctcgc	600
aagcggagca	gcgacggctt	ctccacgat	ggcagcagtg	cgctggagga	caacggatgt	660
agcagctggg	aagtggactc	caagcggctg	aagagactag	gagaactggg	aacagagcag	720
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cacaacaata	gcacagttaa	taacaatatt	cctattccgc	cggtgggtgaa	tacatgagag	1020
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taacgcctgt	tctgaactcg	tccgcacgtg	gctacaaccc	accggctgtg	agcagcgacc	1140
ttctggcgct	gatgcgggat	atggttgcca	aagaagtgca	gaaatatatg	tccagtcac	1200
accagc						1206

<210> 505

<211> 386

<212> DNA

<213> Pinus radiata

<400> 505

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gtcgtggagg	atatggtaat	gatgctgggtg	atgaaagtca	gaggcctcgg	aggcagtatg	120
aacgtcggag	tggtactgga	cgaggctacg	aggttaagag	agaaggggct	ggtcaaggaa	180
attgggggtac	tcctacagat	cagggattca	cagaggaacc	tgaagagctg	agtcgtgcag	240
aggaagagaa	gactgtgacc	cctgagaaac	aggaagaaca	gaaacccagt	gaagagtcca	300
atcaagaaat	ccctgcacca	gagtctgaag	agaagaaaga	ggaggaagaa	gacaaggata	360
tgactcttga	tgagtatgag	aaagtg				386

<210> 506

<211> 408

<212> DNA

<213> Pinus radiata

<400> 506

ggcagtgaat	agcagtctct	ctgttggaat	gaggttcaag	atgcgttttg	aaggagaaga	60
gtctcctgaa	cggaggttta	ctggtacaat	tattggcatg	ggtgagggtg	ataatgtgag	120
atggccagaa	tcaaagtgga	gatcacttaa	gggtccagtg	gatgaaacat	cagtgggtccc	180
gcgaccagag	agggtttcac	catgggaaat	tgagacgttt	gtagcttcat	ctgcagcact	240
taatcctttg	ccagcaccaa	ggactaagaa	gcctcggccc	aatttggtgt	cctcatctca	300
ggaattaatg	atacatggat	cgggcaaaac	agcaacagat	tcttcacagg	tacacagatt	360
gccaagggtc	ttgcaaggtc	aagaaatgag	gacctttgga	ggatcctt		408

<210> 507

<211> 320

<212> DNA

<213> Pinus radiata

<400> 507

gcaaagagtt	gcagattgag	ttggctgaac	tatcttcgtc	ccgatattaa	acgtggtaac	60
atcttctccc	aggaagaaga	gctcattatt	cggttgcatc	gccttcttgg	aaatcggat	120
gtagagaatc	gggggacatg	atctattcat	gcgccagaat	ttcacgattc	ctcatcgaat	180
tagtcatgca	atgtttgtgc	aggtgggtctc	tgatagcagg	acgactgcct	ggtcgaacag	240
acaacgaaat	caagaattac	tggaacactc	atatgagcaa	gaagccatgg	ctgtcaatgg	300
acgaatctca	gtccaatact					320

<210> 508

<211> 395

<212> DNA

<213> Pinus radiata

<400> 508

ccggtccggg	cggtggagag	catcagcctt	ggagttacag	accaggaaaa	tacaagatgg	60
gtagatctcc	ttgctgctcc	aaagaggggc	tcaaccgcgg	ggcctggacc	aaaagggagg	120
atatgattct	ctccgaatac	gttcgaattc	atggcgatgg	tggatggaga	aatcttccgg	180
aaaaagcagg	tcttaagaga	tgtggaaaaga	gttgcagact	acgctgggtg	aactatcttc	240
gtcccgatat	taaacgcgga	aacatttgcc	ccgccgagga	ggagcttatt	attcggctgc	300
atcgctttct	tggcaatcgg	tggctactga	tagcaggacg	actgcctggt	cgaacagaca	360
acgaaatcaa	gaactactgg	aacactcatc	tgagc			395

<210> 509

<211> 658

<212> DNA

<213> Pinus radiata

<400> 509

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tcgctttctg	aacacaaaaa	agttagagga	ctcgaaagca	aatgtggata	atggaaagac	120
accagaagga	catactgcgc	aggctgggag	ttcttcaggt	tctgaagttc	tgcaatctga	180
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agttactagc	attgcacagt	catctgaaaa	tgttacaact	tatcaatatt	ctcactactaa	300
tggagcatat	cttaaccact	atcaacatcc	acatttccat	atatcagctt	ttcaccgcgt	360
ctcaagtgga	ggcgaggaag	gcagcagtg	aaaagggtgg	agcataatat	ctggtggatc	420
acaacaacga	gttggtgtga	tccagtgaag	tgtgaaataa	gatgttagtg	gtgagaatct	480
cacgtgcttg	gttctccgtg	tcacattgac	tataaagata	ggtctcaatg	agtgcgaaga	540
tcataaaatg	aaacagattt	tataaagtct	tcgcaatttt	atggttcaga	ggccattatc	600
agtaaaacag	gcaaccgcgtg	atggtttgtt	tttgaatggg	ttgcagtttg	cacaaaca	658

<210> 510

<211> 351

<212> DNA

<213> Pinus radiata

<400> 510

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ctaagagact	acagaagaag	aatatagaag	atgggtagat	ccccttgccc	cccaaaagaa	120
gcgcttaacc	gtggggcttg	gacagggcatg	gaggatacga	ttctcaccga	gtacattcga	180
gttcatggca	gtgggtggctg	gaaagctatc	tccaaaagag	caggtgagtg	tcaataaaaa	240
tttaatagca	attcttttta	ttagcagaag	gaagtagcaa	tctcccaggt	tatatataac	300
aattcatcag	tcatatatat	cagaaattta	tagtcgagtc	taagaggag	a	351

<210> 511

<211> 754

<212> DNA

<213> Pinus radiata

<400> 511

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aaggctgaag	atggagtgtt	atatactctt	gaaaaaagct	ttttcttctt	gcctaaacct	120
ccgacactta	ttcttcacga	ggagattgaa	tatcttgagt	ttgagagaca	tggagctgct	180
ggtacgagta	gtatgtcttc	acactatctt	gatcttatta	taaagctgaa	gagtgcagca	240
gagcatcagt	tccgaaatat	tcagaggaat	gaatatcaca	atcttttcag	cttcataaac	300
accaaggggt	taaaaatcat	caatttagga	gctacagaaa	ctattgggtg	agttgcagcg	360
gctcttcaga	attctgacga	tgaagctgta	gatccacatc	ttgagcgaat	aaaaatctac	420
gtgatgggtg	agctgggtgct	gaagacagcg	acgaagagga	tgaagacttt	gttgcagaaa	480
acgatgatgc	tggatctcca	acagatgagt	cagaagaaga	gggatcagat	gcaagtgcga	540

gtgcagaggt	caagcaacct	gcaaagaaa	aagtaaagaa	aaaaaaggcg	gtgggtccca	600
aggcaaccga	gaccaagaag	aagaagaagg	gatgacgagg	aagagggagg	aaagaaaaag	660
cagcggcgaa	agaagaagga	tccaaatgcg	caaagaaaag	ccatgacttg	gttttgcct	720
tttctcaagt	gaaagagaga	tctgaaaaag	agtg			754

<210> 512
 <211> 424
 <212> DNA
 <213> Pinus radiata

<400> 512						
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tcactacaag	ccttttagcaa	gcctcacaaa	taagctttgc	agtaggatgt	ctcctcccc	120
gtcatattcc	atgtttccca	attcaggaat	gggcttaaat	ccctcagtga	catcttcaga	180
accctctagt	caggtctccg	gatcgatccc	ccatcaatat	tcaggctccg	aggaagaccc	240
taaaactgacg	atcgatgaaa	gaaagcagaa	gagaatgctt	tctaacagag	aatctgcaag	300
gaggtccagg	atgagaaagc	aacagcattt	ggatgaattg	agagcccgaa	cagctcatct	360
cagagcagag	aacagtcata	tgctaacaaa	attcaacatt	gcttcacaga	aatacatgca	420
gctg						424

<210> 513
 <211> 487
 <212> DNA
 <213> Pinus radiata

<400> 513						
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agactagtgt	caggcgatgc	atttattttt	ctgaggggtg	aaaattcaga	attgcgggtg	120
ggggtgaggc	gagttatgag	acagcaaatg	aatatgccat	catcagtcac	atctagtcac	180
agcatgcatt	taggtgtcat	tgctactgca	tctcatgacg	ttacaactcg	gacctgttt	240
actgtttatt	ataaaccaag	gacaagccaa	tcagagttca	ttattcctta	tgataaatat	300
atggaggctg	tgaatagcaa	cctttcagtt	ggaatgaggt	ttaagatgag	gttcgagggg	360
gaggaggccc	cagaaaggag	gtttactgga	actataattg	gaataggtga	cgttgatcct	420
tccagatggc	catcttcaaa	gtggagatct	ctgaaggtgc	aatgggatga	aacctgtgca	480
attccac						487

<210> 514
 <211> 648
 <212> DNA
 <213> Pinus radiata

<400> 514						
gttttcccg	aatatgggac	gttcaagggt	tccaacaaac	tgctatgttc	tctcagccct	60
ttctcttttt	cctgcggctc	gagcgtgagg	tcgatgtatt	cattcctgtt	aaattttctt	120
ttgttctctt	ttccattttc	gatgcctctg	tcgagttctt	ttttctgaga	tttttgaggt	180
cttcgaagg	ttgagtttgg	cctcagcctt	ggaagtatct	cttttggtct	taggtaattg	240
aattgtaacc	ttcccgaaca	acggcggtag	tggtctggag	attcgcatgt	acgaagataa	300
aatggcgcaa	tctgaggaac	agcctaata	agccacgggt	cctcgccctg	ctgatttctca	360
tagatctata	ccaacgcctg	ttctcatgaa	aacctaccgg	cttgctgacg	atccgagctt	420
gaacgacatt	atctcatgga	acgaagacgg	cactacgttc	atcgtttggc	ggcctgcgga	480
attcgcccg	gatttgctgc	cgaattactt	taaacacaa	aatttctcca	gttttgcctg	540
gcagctgaat	acatacggat	ttcgaaagat	tgtgccagac	agatgggagt	tcgccaacga	600
gttttttcgc	agaggagaaa	agaaattgct	ctgcgagatt	catagaag		648

<210> 515
 <211> 315
 <212> DNA

[illegible]

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tatatataga	gagagagaaa	tatacgtttt	tcagatttaa	gcatggccgt	ttaataatct	120
gcattgcatg	gcgagattgt	at ttgtgtta	gaagttgatt	ttctgttttt	tctcttttcag	180
ttagttagtc	caataaagca	gagatgggtc	gtgctccatg	ctgcacaaaa	gttggtctca	240
acaagggagc	atggctctgcc	gaagaggata	gtcttctggg	aagatatatt	caaactcatg	300
gtgaaggcaa	ttgga					315

<211> 563

<212> DNA

<213> Pinus radiata

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tgcaaagatg	aatgtctcca	cgagaacatt	cactaagggt	tacaagctag	gttctgttgg	180
gaggtcagtg	gatgtaacac	gtttcagggg	ctatccagat	ctgcgtgccg	agcttgaccg	240
tatgttttgt	ctagaaggcc	agctggagaa	cccaagatca	agctggcagc	ttgtatttgt	300
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ggagttttgg	agttccattc	caactcagca	gcagacaagc	agtagttcag	acgactgtgt	480
agctagaaat	tcttctcgca	acatcagatc	agttctcaca	tcgcctggct	ccctggacgt	540
attaagtqta	gatccaattg	tac				563

<210> 517

<211> 392

<212> DNA

<213> Pinus radiata

ttcatgacaa	tgagtggaaa	tttcggcata	tttatcgggg	tcagcccaag	cggcatctgc	60
tgacaacagg	atggagtgtg	tttgttagt	caaagagact	cagtgtctgt	gatgtctgtc	120
tttttattag	gaatgagaaa	ggacagttaa	tgctgggaat	caggcgagca	aaccgatccc	180
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gtccatcaga	atttgtcata	ccattgtcta	agtatgaaaa	ggcagtttat	cacacacgag	360
tttcaatttg	aatgcgcttc	cggatgctgt	tt			392

<210> 518

<211> 319

<212> DNA

<213> Pinus radiata

tttaagcatt	tcattgagtc	ttaggtcacg	gtttccaatc	ctggcaggtc	tcattattct	60
gtctctctgg	caagatgggg	agaactccct	gctgtgaaaa	aggtcataca	aacaaaggcg	120
cgtggaccaa	agaagaggac	gatcgctca	tcgctcacat	tcgagccac	ggcgaaggcc	180
gctggcgctt	gcttcccaa	gccgcagggc	tgatgcatg	cgggaagagt	tgcaggctcc	240
gatggataaa	ctaactgcg	ccacatctca	agcgtggaaa	cttctcagaa	gaagaagatg	300
aqttcatcat	caactcca					319

<210> 519

<211> 513

<212> DNA

<213> Pinus radiata

<400> 519

accgtcgaga	gagcttcata	tctaaccaat	acataacacc	tgtatggctt	catagcttca	60
cagcaacagg	gcaccatggg	ccgagctcct	tgctgggata	aaatgggagt	aaagaaaggc	120
gcctggactc	tagacgaaga	taaaatactc	gtcgtattaca	ttaccaaaca	tggccatggc	180
aactggcgcg	cactgcccga	gcaagcaggg	ctcctgcat	gtggaaagag	ttgtcgcttg	240
cgggtggacga	actacctgaa	acccgacatc	aaaagagggg	atcttagtcc	agaagaggaa	300
gatcaaatta	ttaaattgca	tgagctcata	gggaatagat	ggccactat	tgcttcgtac	360
ttgccaggaa	gaaccgacaa	tgagatcaag	aacgtgtgga	acaccattt	aaagaaacgt	420
ctcgcgcgta	tgaaagccga	ctcggttgca	gtcgacgcac	agccaacgcc	tgcgctcttc	480
ctggcctcat	ccactacaga	aatgacgtgc	cac			513

<210> 520

<211> 219

<212> DNA

<213> Pinus radiata

<400> 520

gtgcattgaa	gccaatggcg	gaggggctcc	tggacgctcg	cttcccaagg	ccgcagggct	60
gcagcgatgc	gggaagagct	gcaggctgcg	atggataaat	tacctgcgtc	ccgatgatgt	120
caagcgtgga	aatttcacag	aagaagaaga	cgatcttata	atcaaactgc	actcactcct	180
cggcaacaag	tggtctctaa	ttgcagggag	attgccagg			219

<210> 521

<211> 392

<212> DNA

<213> Pinus radiata

<400> 521

cttagcgacg	gttcccaatc	cctagtcctc	gcactttact	cgtctctctg	tgaagatgag	60
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ccgactcatc	gcctacattc	gagcccacgg	cgaaggcggc	tggcattccc	ttcccagggc	180
cgcaggtctg	ctgcgatgtg	ggaagagttg	caggctgcga	tggataaatt	acctgcgtcc	240
taatctgaag	cgtggaaact	tctctgaaga	agaggacgat	ctcataatca	aactccacaa	300
cctcttgggc	gataagtggg	ctcttatcgc	gggtcgattg	ccggggccgga	tggaagacca	360
gataaagaac	tattgggata	cccactttaa	ga			392

<210> 522

<211> 447

<212> DNA

<213> Pinus radiata

<400> 522

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aactcaagtc	aaacagcacg	gcaacccac	caggagctgt	actaagggtg	ataagcaggg	180
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ggttgtgtac	acggataatg	aaggagatat	gatgcttggt	ggatgatgat	catggcagga	360
gttctgtagc	attgtgcgta	agattttcat	ctatacacga	gaagagggtg	agaaaatgac	420
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<210> 523

<211> 822

<212> DNA

<213> Pinus radiata

<400> 523
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 ctgaaaatcg gtacgacccc aacgccatca aagttctcaa catgagcggc cagcaggctc 180
 gtcacatcga gcgcgctgtg gcgctggcac tggcgtecca tgttgatcaa tccctaattt 240
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 gattgaatgt tattactgcg gaggaccaag agtttttaac ggcggaatcc attgctgcaa 420
 aagaaatata tgaagatcca ggggtgaagg aggttagaag ggtcgatgat atctttgggt 480
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 cggatgatat ggggcttggg aagacgctgt cattgctttc gctcattgca acgaaccgtc 780
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<210> 524
 <211> 390
 <212> DNA
 <213> Pinus radiata

<400> 524
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 gcgtcgccaa atgtggagaa accccagaga gtccggacag agccattccc agcctccaga 180
 gaaagataga ggaaaaactt tcggccaatt taagggaatc cgaatgcaa aatggggaaa 240
 gtgggtgtcc gaaattcgga tgccgagatc gaaggagagg atctggctag gatcctataa 300
 aactgtcgag caagccgcc gtgcttacga tgccgcactc tattgcctca gaggacaaa 360
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<210> 525
 <211> 299
 <212> DNA
 <213> Pinus radiata

<400> 525
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 tgcagtcgcg actggcggaagggtacaat gcgaaggaaa aagaagacaa ttcataagac 120
 tgccacggca gatgacaaga gacttcaaag taccttgaaa agaataggcg tgaataacat 180
 ccctgctatt gaagaagtca atatttttaa ggatgaccat gttattcatt ttgctaaccc 240
 aaagggtccag gcttctattg ctgccaacac atgggtgggt agtgggcatc gcaaacaaa 299

<210> 526
 <211> 101
 <212> DNA
 <213> Pinus radiata

<400> 526
 gggaaagacc cagatgaagt tgaagcgaga acgcgaccag caggcaaggg acgcttcaaa 60
 gcgccgcaac gggctgctga agaaagctta cgagctctcg g 101

<210> 527
 <211> 361
 <212> DNA
 <213> Pinus radiata

<400> 527
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 gccaacggtg acagaagcaa gggagcctgg accaaggaag aggatgacag gcttacccaa 120
 tatattcagg ctcatggaga aggatgctgg cgttctctcc ccaaggccgc aggtctgctt 180
 cgggtgtggaa aaagttgcag gctgagatgg ataaattatc ttcgccctga tctgaaacga 240
 ggagggtttt ctgaagatga agacgatctt attctcaaac tgcacgccct cctcggaaat 300
 aagtgggtctc tgatagcggg tcgtttgcct ggtcgaactg gccaccaaaa tcaaaactac 360
 t 361

<210> 528
 <211> 337
 <212> DNA
 <213> Pinus radiata

<400> 528
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 ggaggatttt ctgttttacg aaggcatgct gatgaatgtc ttccacctct ggacatgagt 120
 cagcaacctc cttcgcaaga gctggtagcc agagatttgc atggaatgga atggcgattc 180
 cgccatata ttagaggcca accacggagg catttgctaa ccactgggtg gagtgttttt 240
 gtcagctcaa agagactggt agcaggagat gctttcatat tcttgagggg tgaaagtgga 300
 gaactgcgtg ttggagttag gcgtgctatg cgtcaga 337

<210> 529
 <211> 491
 <212> DNA
 <213> Pinus radiata

<400> 529
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 gggagagatg cctggattcg acgaacacca tttccgtata gagaatacgc gcttaaagga 120
 ggagcttgat cgagtgtctg gcattgccac aaaatatata ggaagatcaa tgccgcattt 180
 ggcaccata gcaacaccac ctatgctcat gtcctctctt gaactcgcaa tggggagctt 240
 cgggtgggaag cagtcacagc ctgccgcgcc ctcggtcgat tttatttcag gtccactggc 300
 tgacgggcct ataattaatt gtggaacctt gacggattta gataaacctg tggcactgga 360
 acttgcaatg aacgggtgtg aggagttgat ccggatggca caaactgat agcctctctg 420
 gttgaaggat gttaatgcgg gcagcgtgaa agagcttttt gaacttggat gagtatggca 480
 gatcgtttcc t 491

<210> 530
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 530
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 tggctgtgcc aggccaacga agcggacagc aaagtcttcc cacgtgctct tcttgctaag 120
 agcgctctta ttcagactgt tgtatgcac cctctcgcgg acggtgtctt ggagtttgga 180
 actactgaag tggagcgaga agaccctggt ctagtccaac gcaccataag cttttttttg 240
 gagtaccca aaccgatatg ttcagagcaa tctacatcca gccacagtg ctcagacaga 300
 gacgaaaagg atcaagtggg catggtcaca ataatgtcct ccgacagcat 350

<210> 531
 <211> 437
 <212> DNA
 <213> Pinus radiata

<400> 531

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aagttctctgc	tagctccgaa	gatcgacgcc	accattttcct	ccgccgccgc	tccgccatgg	120
aagaccctgt	tcgccgccgc	cggctttctcc	ccagtggcct	tcagcaactt	caccgagacg	180
caggcagagt	acctgatcca	gcgcctccat	agccgcgggt	tcgaagtcga	gaaagcgcac	240
gcggctctcc	tctctgggtg	gcagggccgc	ccactggctc	ccgccactgc	ctggagggtgc	300
gggccccccgc	cttaattaat	taaattatca	aaaaccaatt	tagcagacta	ataacagaaa	360
taaacaaaat	ctctgttttt	ccttttttct	tgtaattttt	cccgggtatt	ttctgttaaa	420
cctgagcttt	gaaaaac					437

<210> 532
 <211> 508
 <212> DNA
 <213> Pinus radiata

<400> 532						
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atgctcacat	ttttggttg	ttcgaaacca	gcttttgagg	tatccttggc	agatgtatct	120
caaacacagc	tccaaggaaa	gaatgacgtt	gtcctagaat	tccatgtgga	tgatacaact	180
ggagccaatg	agaaagattc	tctgatggaa	ctgagcttcc	acattccaaa	ctccaataca	240
acatttgctg	gggatgaggc	gagccctcca	gcacagattt	ttcgagagaa	aatcatgtca	300
atggcagatg	tggggtcac	gggtggagaa	gcagttgcat	tgtttgagga	cattgctatc	360
cttactccaa	gaggtcgtta	cactattgag	ctccatctat	ctttcatgcg	gcttcaaggg	420
caggccagtg	attttaaaat	tcaatacagc	agtgttcttc	gcctttttgt	tcttccaaag	480
tcacctcaca	cacttgtggt	gatcaccc				508

<210> 533
 <211> 374
 <212> DNA
 <213> Pinus radiata

<400> 533						
tctaggtcat	tcacagaatt	ttagtactga	tgtcaatagg	atgccggatg	ttccaccccg	60
gagaggaggc	catcgcaggg	ctcagtcgga	aattgcgttt	cgcttgccgg	acgatatcat	120
gtttgatggt	gatcttggtt	ttgctggttt	tgacatgccc	acggtctctg	atgacgcaac	180
tgaggccgaa	gatctgattt	ccatgtacat	ggatatggag	aaattaactt	cttttgagaa	240
gccgttgaat	tctgcggcgg	gagaaggatc	gaagctcccc	tcgggtgctg	agactaatcg	300
acctccgcat	cattcaagaa	gtctttctgt	cgatgctgta	ttttctggat	tcgaaggtaa	360
catggaagat	acga					374

<210> 534
 <211> 487
 <212> DNA
 <213> Pinus radiata

<400> 534						
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ttcggagtag	tgtacttcca	gaactgggtat	cttcaagcac	caagaccatt	ttctgagctg	120
ttaaagatac	tatgagtgat	atggatcggt	catcatcaga	agattcagtg	gattctcaag	180
gtgatgtgaa	tgcaaactac	aagatgggtt	tctcggaaga	tgaaaaggat	ctcataagca	240
ggctgtacaa	tctactgggc	cagaggtggg	ctttgattgc	tgggcgaatt	ccggcgagaa	300
ctgcagagga	aatagagaaa	tattgtagca	ggcgatatat	tagtgagtac	taggtcacat	360
gggttttctaa	tagtcaatga	agaagaaggg	tagaagcagc	cttgccctatc	taactgattt	420
aagtttgagg	tatatatatc	gacttttgat	gatggccata	tcttctgggg	tttataagga	480
agtatgt						487

<210> 535
 <211> 372

<212> DNA

<213> Pinus radiata

<400> 535

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atgataaccc	acagaacacg	aataagaatt	cttcttcggg	gggaactggg	gatgccggaa	180
gctttgaatg	caacatctgc	cttgaacttg	ctcaggaccc	aattgtgaca	ctctgtggtc	240
acctgttctg	ctggccttgc	ctgtacaaat	ggcttcacgg	tcattcgaag	tctcaagagt	300
gccctgtatg	taaggctttg	gtggaagagg	acaaaattgt	tcccttgtat	gggcgtggga	360
aggtgggttc	tc					372

<210> 536

<211> 836

<212> DNA

<213> Pinus radiata

<400> 536

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ttatatacat	agacacatgg	gggctccgaa	gcagaaatgg	acttccgaag	aggagggagc	180
tctcaaagca	gggtgtgaga	agtatggcac	tggaagtggt	cggaccattc	agaaggaccc	240
tgagtttgga	cactgcctcg	ccgctcgttc	caatgtggat	ttgaaggata	agtggcgcaa	300
tatgagtgtg	agtgttagtg	gccaagggtc	aagggataag	gtaaagactc	caagagtaaa	360
agctattgcc	tctctgcctt	attcatcagt	tactgctgaa	tctacttctg	tattctcaat	420
agaagcaaca	acctcaacaa	ctccagataa	tcttatttcc	cctaaaagtt	catcaaattg	480
gaaaattcac	tcaccaaggt	acgatgggat	gatttttaga	gcccttacia	gtatgcaaga	540
tccaaatggg	atagacattg	ccacaattgc	aagtttcatg	gaggagcgac	atgaattgcc	600
ccccaaattc	aagagggcgc	ttggcacaaa	gctaaggcgg	ttggttgac	aggaaaaggt	660
tataaagatt	cgcaatagtt	acaagctcaa	agatatgaca	tctacagaag	tgacatctga	720
agtcttggga	tctgcaattc	caattgataa	ttcaatgcaa	tactctaattg	cattcaccaa	780
tacaattgat	accttttcag	tagatagagt	aatgaagct	tcaatggctg	ctgccca	836

<210> 537

<211> 478

<212> DNA

<213> Pinus radiata

<400> 537

atcacagtcg	gcctctgatc	aaagaagaag	ccgaatcagg	tgataattct	gcaaattctg	60
cagatgtaga	aactcttctt	cctcaggttg	atgaaacagc	ttctgctgat	ctgacagtgt	120
tcccaggttt	tgttaccctt	tatgtaccat	acgggttccc	catatggcac	acttttagac	180
ccacaataac	tcaaacttcc	aatgtttata	agccaacagc	tgtaatgcca	actgctccaa	240
taaaaatgga	cgaatgcaca	gggttatccc	agttaagcct	cggcgggtgt	gcagcggctt	300
ctgcaatgaa	accttcagaa	ctgtcactca	aattacatgg	aagaccccc	tctagacaat	360
cagcttttca	ggccaaacca	tctctcaatg	aaagcagtag	tttgagttcc	agcagcaatg	420
tcacagtggt	agtctgaatt	gcaaggaaaa	gcaggtgtga	agaagatgat	ggtatgga	478

<210> 538

<211> 565

<212> DNA

<213> Pinus radiata

<400> 538

cacatccata	catgtggggg	ggacagccgt	tgatgccacc	ttatgggact	ccactaccat	60
atcctgcaat	gtatccacat	ggaggaatct	atgcacatcc	ttccatgcct	ccgggtgcac	120
ttccgtatgg	tcactatgga	atgccatcac	ctggcaatgc	tgaagttaca	acgactttag	180

cacttccaaa	tgctgaagca	gaagccaagt	cctcggaagg	caaagagcgg	aatacaatga	240
agagatcaaa	aggaagttta	ggaagccttg	gaatgattac	tggcaaagga	ggagaagggtg	300
gcaaggcaac	atcgggatct	gcaaagtagg	ccatgtcaca	aagtggggac	agtggcagtg	360
acggttcaag	cgaaggaagc	gaggaatata	acactcaaac	tgagtcacaa	gtggcgagaa	420
agagaagttt	tgatcaaata	atagtagatg	gagccaatgc	tcagagtacc	aatattcaat	480
catataattc	ccaggctgga	gaaccctatg	tgacttccgg	cgggcatgca	atgggtaatc	540
ccattagtca	agctgttgct	gcagt				565

<210> 539
 <211> 350
 <212> DNA
 <213> Pinus radiata

<400> 539						
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tttctaacag	agactccggg	ctcagcaaca	gatacacaag	aagctgagtc	aaaaattcag	120
gagactagaa	ctaaggatca	agatgaaagg	ttgcctgaga	atgggaagtg	ttggagcaac	180
aagcagacat	tggatcaact	tacagaacag	atggggcagc	tggcatcagg	gacgcaaact	240
tgaaataaga	ttatagaggc	tgctagttag	tgcatatcac	tgtcagttct	gctaaaattt	300
ctgggttagca	atgggtcactg	tttatgtgtc	ctaatagaatt	gctccaaata		350

<210> 540
 <211> 479
 <212> DNA
 <213> Pinus radiata

<400> 540						
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aagagtgtct	gtgttgccca	tgatatctct	tctgatgaac	aagatctgat	aaatagactt	180
cacaatcttc	tgggcgacag	gtgggcactg	attgcggggc	gccttccatg	gagaagaaga	240
gaggagattg	agaattactg	taaaatgaga	tacacagcca	ctacctcttc	ttcacgctct	300
tgaatctccc	tttctctcgc	cagggttatgg	agtgtggacc	aactatcgta	atcagatagt	360
ttgggttgat	tcagattgtt	taggtttatc	tccacttgaa	aatatgtgtg	gatatttggt	420
tgtttgtttt	atcaaaacca	agtatagaag	aaataaaaatt	tgatcgtttt	atcgatttta	479

<210> 541
 <211> 580
 <212> DNA
 <213> Pinus radiata

<400> 541						
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ggctgagcgg	caaaggcgtg	agaaattgaa	ccagaaattt	tatgagcttc	gtgccgtggg	120
tcctaattgta	tcgaaaatgg	acaaagcttc	tctgctcggc	gatgctgctg	cttatatcaa	180
agatctcttt	tccaaacagc	aggatttgga	gtccgagagg	gttgatatgc	aggttcaa	240
tgacactata	aagaaggaa	tattgatgaa	ttctttgaag	ttggcagcta	aagaagcaaa	300
agatctttca	agcattgacc	ttaaagggtt	tagccagggg	aaattccccg	gcttgaattc	360
agaagttcgc	attgttgggc	gagaggcgat	aataagaatt	cagtgtacta	aacataatca	420
tcctgttgcg	agactgatga	tagcactgca	agaacttgat	ttggaagttc	tccatgcaag	480
tattttctact	gtgaaggatt	ccttaattat	ccagacagtc	attgttaaaa	tgaccagagg	540
tttgtacacg	gaagaccaac	ttcacgccct	gctttgtaag			580

<210> 542
 <211> 445
 <212> DNA
 <213> Pinus radiata

<400> 542
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gtaatatga agtccaagg accaggggct tattaagggc atcgagtaaa gcctctgaat 120
tttcaacctt gtagaaccta attgagtaaa acttcattca gttggattct catcgttttc 180
atggcttaca accgcaaaca tgccgccgcc gcaaccagcc cggacagcag cctgggctca 240
gacaacgagt ccggcggcgg aggaggaggc ggcgaggagg aagggcagtc gacgaagaat 300
ggcaatggca actacattag agagcaggat cgcctgctcc ccatagcgaa cgtggggcgg 360
ataatgaaac gggcgctgcc ggggaatgag aaaatctcca aagacgcgaa ggagacggtg 420
caggaatgtg tgtcggagtt catca 445

<210> 543
<211> 682
<212> DNA
<213> Pinus radiata

<400> 543
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ataacaacaa caatcatgac gaaatatgtc cttcgctcgt gaagcttcaa gggcggcaga 180
cttatagctt gtaaaagtgt tgccctttagg gttttgccat tagtggtgca agcctgtaaa 240
ttataatttg caggttccat ggccacgcgg aatccctttg acctgcttga ggatgatgat 300
aatggcgacc cgtcgtcatt gctggacacc ctcgctgctg caaaggacaa gccggcggca 360
gtggctgcca agaaacagca gccagcagtg tcggcgagcg gaaaactgcc gacgaaaccc 420
cttcccccg cccaggctgt taagggaatcg agggttttct caaatgaggg gggcagggga 480
cgaggtggcg gtcgagggcg ccgtggattt ggcaacagag aatcgagga gtttggacgt 540
ggcgtgggg gaggttataa tgttgaacgg aacttcaacc gcgagaacaa tgcctattcg 600
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<210> 544
<211> 372
<212> DNA
<213> Pinus radiata

<400> 544
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tcatcactgg ctcacttcac ctgtttgagt atctgccatt tttggatgtt tgtgtaagct 180
tggtctaaata ccagagacac aaagaaaccg tcctgtagcc ggagttatcg aaactattta 240
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ctgcaaagtt agatcggctt tatgataagt cattgcattt gcgaagcggg ctgaggtctc 360
tgactcctgt gc 372

<210> 545
<211> 444
<212> DNA
<213> Pinus radiata

<400> 545
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ctgggattcg aatctttgat cacaaaatgg caaattatac ctttaagcat gcaggcccag 180
ctcattattt tcaactctacg aattccggtt actatttcat gaaccgggca tttatgggct 240
acaagcgact tttattataa ggcttctttc ttctctttga ctttcatata gctgacatga 300
atggcagaag agatggacac accgacaaaa acaacaaaga cgcctacatc acaggaacaa 360
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aattctggaa agacaccact ccct

444

<210> 546

<211> 570

<212> DNA

<213> Pinus radiata

<400> 546

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caccccatga	gaaaacacta	cagaggagtt	cggcagaggc	aatggggcaa	atgggtagcc	120
gagattcgcc	tccctcagaa	tccaacccgg	ctctggctcg	gcacctttga	caccgcagaa	180
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aatttcccc	atttgttctc	aaaaaagtat	cagaattcct	ctcccagctc	caccaatggc	300
aggattcctc	gcctttcttg	tgaataatct	gacagaaat	atgcatataa	tgggtgaccca	360
gttcatacga	atgtatataa	gggtccccc	attcggataa	ctgcatacaa	cggcgaccca	420
gttcctatag	atgtatataa	gagtgaccca	gttcgggtta	gtgcatatac	tgggtgaccca	480
gttcggataa	gtgcttatag	tgggtgatcca	gttggaataa	ccgttacttt	agcggaatcc	540
gagcttgaaa	gctcctgcag	ccatgaatcc				570

<210> 547

<211> 532

<212> DNA

<213> Pinus radiata

<400> 547

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ggaaggattg	gcaatagaga	gaatagttta	gatgtcacac	gtgggtgggc	tctttgggac	180
atttttcgga	gagaggacat	accaaagtta	caggattatt	tattaaagca	ctgtcaagac	240
ttcagacata	gcagaaatgt	atctgttgat	tcggttggtc	acccattca	tgatcaaact	300
ttttacttga	atgaagggtc	taaaaagaaa	ttgaaggagg	aataccaagt	agaaccatgg	360
acatttgaac	aacaccttgg	tgaggcagtt	tttattccag	ctggatgtcc	tcatcaagtt	420
agaaacttga	agtcctgtat	aaaagtggct	ttgaactttg	tttcacctga	aaatttataa	480
gaatgcattc	gttttagagga	tgagttgcgc	ttgcttccaa	agaatcacag	gg	532

<210> 548

<211> 447

<212> DNA

<213> Pinus radiata

<400> 548

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atcccaacgc	gactggagag	gcggatccgg	cggagtttcc	aggggatgat	gctactgtag	180
atggggaagt	cacggacgcc	gagtgggttt	acttggtgtc	catgatgaag	tcatttggaa	240
atggcttggg	ggtgccggga	caggcatttt	gcggtggcat	gcctatttgg	atcattgggt	300
cagaaaagct	tcagagctac	aactgtgagc	gggtcgtca	ggctcagcaa	ttcggcattc	360
aaaccatggg	atgtattcca	acacctaata	gagttgttga	gttggtgtcc	acggatttaa	420
atccgcagaa	ctgggatttg	atacaga				447

<210> 549

<211> 1163

<212> DNA

<213> Pinus radiata

<400> 549

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tgttttggaa	acaaaacaat	gtgtggaggt	gccattatca	aggaattcat	tccggccaat	180
cgatctcggc	gtgtaactgc	tagggagctg	tgcccggtt	tcgacacgtt	cgctgaattc	240
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aagcagaaga	gtaagccag	caagggttct	gtcaagaccc	agcaggaatt	ttgttccggg	360
tttgaaggtg	ggagaagtga	ggtgattcct	cctttggaag	atgtggaagg	gtccacaccc	420
acgattgggg	ggaggaagag	aaaaaatggt	tacagaggta	tcagacagcg	tccatgggga	480
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aatgcaagct	gtaaggtaaa	accctcatat	tcagcaaadc	ctgatttatt	aggggggttac	780
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caaaacaatt	caaatgcatg	cacgggtccaa	ttttctgagc	atagcaattt	aacccaaact	960
tcgcagaaat	cgtgctcttg	tgagatctgt	agtcacaatt	actcagagat	gagcaatgta	1020
atgcctcctg	cttatggcaa	tgctgtaaat	tttgaaccag	tgcaaacttc	caatccagga	1080
ggttattttg	attctgacca	tagcagcatg	tcatttgaag	gggcgcattt	cccatgggct	1140
caagaaataa	agacgccaga	agt				1163

<210> 550

<211> 545

<212> DNA

<213> Pinus radiata

<400> 550

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ctgtttatat	aaatgtatth	tcgggggatg	ctacaactga	atttcccagt	gcattgcaac	120
tgggcagagg	agggattttg	gcagatgcca	tggggcttgg	taagactgtc	atgacaatat	180
cactactgct	tgcaaattct	ggcaaagggtg	gctttagtgg	tatggatact	gtggagccct	240
ttagtgcgaa	cagctgtagt	gaaaaaacaa	tcattcatcc	ttataatata	gggtgtagagc	300
tgggaccatc	acagtacacc	aacaaaacac	aaggcacaag	tatgctaagg	agatcaagca	360
gtgggttaca	taaaggaggc	gggaatctta	tagtatgtcc	tatgacatta	ttaagtcaat	420
ggaagacaga	acttgagacc	catgtacagt	ctggaaccat	gtccgtgtat	gttcattatg	480
gacaaagtag	aacaaaggat	gttaaaagtc	ttttgcagca	tgatgttgtc	ttgaccactt	540
atggg						545

<210> 551

<211> 353

<212> DNA

<213> Pinus radiata

<400> 551

gcactacaag	tctatacctc	ctccatctca	tgttataaat	accagttggc	ttctttcttg	60
tctcttttga	ttattgattg	gctggctgtt	ttctctcttc	tggacctcga	tcttcgggtc	120
tcacgatat	cataatctct	acctctatct	ccatcggggc	ttcgttgcc	ctgtatgttt	180
gtaggtatga	tgtccgaagt	tggcagccca	acaagccagg	acagccgcaa	ctctgaggat	240
ggagaaaggg	agaactgtgc	tgtgagagag	caagataggt	tcatgccc	tgctaagtgc	300
attaggataa	tgaggaaagt	tctaccaccc	catgcaaaaga	tttctgatga	tgc	353

<210> 552

<211> 448

<212> DNA

<213> Pinus radiata

<400> 552

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cagacgagag	gaggaggagg	aggtgcgaag	atgacgcagc	atcaggtggt	aactacggag	120
ttggtacggc	aggcaactga	gcgcttacga	aagctttgca	ggacgggagt	caaagtcgaa	180
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tataaccaa	ttccgactat	ggtgcatgag	ttgccacaat	tagtgagaca	ggtttttgaa	300
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gcttgctgaa	gtgggttggt	tcgtgtcacg	gacacagatg	aactgctaac	catgtcaaag	420
gagctgtcaa	gtcgttttac	gagtacgg				448

<210> 553
 <211> 883
 <212> DNA
 <213> Pinus radiata

<400> 553						
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gggtgcagg	cgaatcgccc	aggccgattt	gaattctcct	gaggattgac	aagatgacgc	180
gcaagtgtc	gcactgtggc	aacaacgggc	ataactccag	gacgtgccct	aaccgcggcg	240
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ggaatttgat	gatgatgtcc	aaccctagct	ctcccgtga	cccctccgag	ccggcctctg	360
ccgctgtgc	tgccgcggcg	gcggcgccca	gtggctatct	ctctgatggg	cttgttgaag	420
cctccacttc	ctccaattct	cgcgagcgga	agaaagggtg	gccatggaca	gaggaggaac	480
atagaatgtt	tttgctaggt	ttgcagaagc	ttggcaaagg	tgattggaga	ggaatagcac	540
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ttcgacagag	caatatgact	agaaagaaga	gacgttccag	tctgtttgac	atgacgccgg	660
tgagtttttt	cttcctgtct	taaattcttg	gtgtgggtgg	catggaagg	attcaggagg	720
cgtcttgggc	aaagatccca	aaaattggat	ttgcaatcaa	tcattgattca	taattgttct	780
gaaaattatg	ctaagaacta	atctcatctt	tcaaacctca	aatggatttc	ttttgtttga	840
agttgtttct	aagtttcttt	aatgtctatt	cataatttca	ttt		883

<210> 554
 <211> 310
 <212> DNA
 <213> Pinus radiata

<400> 554						
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gctggcgcaa	cccttagaca	atttgcagaa	ttagaatcaa	tggagcttca	gaagacttca	120
ccttaccac	atcttcgcca	ttatcggttc	accttgcccc	cttcacctcc	tcctcttccc	180
ccacctccac	cacctcctcc	tccattgtct	ctcaccctct	ctcctagtta	tggatctgca	240
acttttctct	ccagcatccc	agtcaatcga	agcatctaca	gatgtccgta	tcagcaatgc	300
tcaccatcat						310

<210> 555
 <211> 463
 <212> DNA
 <213> Pinus radiata

<400> 555						
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agataacatc	atggaatctg	agctgcaatt	ttgttgcttc	tactttgcag	ggctgtgaat	120
gtattgagcg	cctggagatt	acagggattg	gagatccatc	aggacgggga	cttgggtttta	180
gttatcttct	agttgtctca	aagccaccaa	tatcgagtgc	tttgggttaa	aaaaaggcag	240
ctgctgcacg	tggtggttcc	gcagttactg	gtactgatgc	tgatctccga	aggttgagta	300
tggatgcagc	aagggagggt	ttgctgaagt	ttaatgttga	cgaggaacaa	attgaaaaga	360
tgactaggtg	gcacgagatt	gcaatgggtg	gaaagctttc	aagtgagcaa	gctgcttcag	420
gcgttaaagt	agatgcaaca	gcattgaata	agtttgcacg	ggg		463

<210> 556
 <211> 496
 <212> DNA
 <213> Pinus radiata

<400> 556
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 ctgtggagcg gatcgctcgc cgtttgagtc gggtcgcaaa cgggcaattt gcgatgtgga 120
 atgtgcagaa ctgtggaagt aggggttaatg gaagacaatt gtgcttctga tgatcgggag 180
 catatagctt taatcgatta tacgtttgct ctttgtagt tcattgggtt atagtgttt 240
 cagtggagta gcgtgcagca gtttgatcgg cgaaaatgaa gagtccttca accagctgcc 300
 tttctcatcc agtggagggg gagcagaaga gcataaattc tgaactctgg catgcttgcg 360
 ctggaccctt tgtttccttg ccttcagtggt gtagtggtgt gtattatatt ccacaaggcc 420
 acagtgaaca ggttgagctt tctactcaga aggtagctga cacgcacatt ccaaattatc 480
 ctaatcttcc ttatca 496

<210> 557
 <211> 642
 <212> DNA
 <213> Pinus radiata

<400> 557
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 gaaattagaa ctttcattaa ctccagtggt agtgaatcct ctgccagtag ccaggggcaa 120
 gaggcctcgg ccaaataatg taccttcctc ttccgattta tcagtgcag acaaggcccc 180
 agtggattct actcaggtgc acaggtttcc aagggtcttg caaggtcaag aagttatgac 240
 cttgggggga tctttgggtg acggtgagtt ggagagtggt caaaagatgg ttgcatgggg 300
 cggatcaaaa ctggatgatg tcaaagcaga aggtatgggt tgtcaaagaa ggttggtttc 360
 agaaaattgg atgccgccac ttaggcagta ctactatat tcagatactt tctcaagttt 420
 tcaacctgtg ggggaagtgc aagaattccg tggttcatta acaaatagta tcctggaaga 480
 tggccagcag ccaaagcttt caagaaaaca gtttcaggac caagagggtg aaattgtgga 540
 tggatcagga ctgtgggtcaa tgagttttcc aaacagctta caattgtgag agtcaaatag 600
 gaagatgtct gcgacctctg ctgcccaatc gcacaagcag ag 642

<210> 558
 <211> 653
 <212> DNA
 <213> Pinus radiata

<400> 558
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 gtggcacatc agtttctgta gcttgataaa aagtcaacag gattatattt gtgccctgta 120
 tgagtgggca cgtctaagtc ttgttcagct tgggaatgaa gcacagtggg aacgaggaaa 180
 ccgcccacct atttatactc tttgtgatgt atggcaacaa gtacttaaaa gattgccaga 240
 caaggttgct tctgagtcga tcaaaagctt catctctggt gttcatgcta tagtgatgca 300
 gcaagctgat gaacaaaagc gcaagaagaa agcagaaaac atttctagag agctgcaaaa 360
 gaaaatgatt gctttgcgca atattgaaaa gaagtattat agttcgtatt caatacctgc 420
 tagggcagat gctataacag agtctcaatt tgaattgggt cacacagatc ctttggcaga 480
 aaaaagagca gagattgaaa tatataaaaag gcggttagaa gacgaaaagg ccaactattc 540
 aaaatccgcc agaggaacca gagaaatgac cttaaataat attcaaacag gccttccagg 600
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<210> 559
 <211> 100
 <212> DNA
 <213> Pinus radiata

<400> 559
atggctatgg gggaggcgga gcgatcacg gggccatgga gtcccaggga ggacacatcg 60
ctgcacaagc tggtagagaa atctgggcca cggaactggg 100

<210> 560
<211> 385
<212> DNA
<213> Pinus radiata

<400> 560
gttggcgccc tgcaaaattc gccagaaatt tattgccgaa ttacttcaag cccaacaatt 60
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gaagaaaagg tctaatacaa cctcctccac cacctgagaa cagatccatt tcaccgtcta 240
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atgcccttag ccataagaat gcaattgaag aaaatgagaa actgagaaaag gaaaatctgt 360
tattggtatc tgagctgaca caaat 385

<210> 561
<211> 328
<212> DNA
<213> Pinus radiata

<400> 561
cccacatgga ctgcagcacc attcctccga tgatgctaatt ggcatggcg ataagagaat 60
tggggtaggag acaggcagct ctgtatgtcc agagctctgg catgcctgtg ctggccctct 120
catatctctg cctcctaagg gcagtcgtgt tgtgtacttt cccaggggtc acctggagca 180
gattgcagac aatgagcttc acaggggtgg ccgtggctcc ttctcaaca tcaaccatgc 240
ggctgcaccg atggcagagg aagcatcttc tgcagcagcc ttgaatatac cgccatcggt 300
cataagtcag ccgtgaacca acagatgc 328

<210> 562
<211> 440
<212> DNA
<213> Pinus radiata

<400> 562
aggaaacgct cacgctctta aagattagat cagaaatgga ttctaagttc cgcaagcca 60
cccacaaagg tcccttatgg gacgaagtct caagggctct tgccgagcac ggtagcaga 120
gaagttccaa gaagtgcggg gagaaattcg agaattctta caaatactac aagaaaacaa 180
aagaaggcaa agcaggaagg caagacggaa agcattaccg tttcttttagc cagctcgaag 240
ctttgtacgg aggaacaact attgatgctg ccgacagttg ttttggcgta acaacacgga 300
caaattttaac cgaaagtcca ggcttggaact ttaacggaga cggagcctcg cagaaatacg 360
ctgacactca ccacaacagc gagggcttta gtttgtcttc ggattcttct tcggatgacg 420
agtacagtca cgatatacag 440

<210> 563
<211> 359
<212> DNA
<213> Pinus radiata

<400> 563
ggaaagtcga acatagaaat cttctgtgca ttcatagaat aaatattcta caggctgcac 60
tgtaatttag gcgagaaatc gaataaaata tacatttgtt tgtttacgat ggagttggca 120
gatgagcatt ccctcctccg ctataagaaa cccaagctct ccaagaatgt cgtttccgag 180
cgccgcccga ggcagaaaat gaacaagctt ctctacactc tgagggctct gggtcccaat 240

atttccaaga	tggaacaaggc	atcgatttta	gcggacgcc	tcgaatatgt	ggagaagctg	300
aagcaacagg	tggaagagagc	tgagtctgac	gttcaatcca	ccaacgtctc	ggctctatc	359

<210> 564
 <211> 249
 <212> DNA
 <213> Pinus radiata

<400> 564						
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agtgggattg	atttcgagaa	gaatgaggag	aagggtatcg	attcgcatcg	tttcggcgag	120
cttctcatgt	catcgggcgt	tgtgttgaac	gaaaatgtga	attggattac	cttccacagt	180
ggatatgact	ttgggtacct	gttgaaattg	ctgacatgcc	agaacctgcc	ccccgaggaa	240
tcggatttc						249

<210> 565
 <211> 542
 <212> DNA
 <213> Pinus radiata

<400> 565						
agaaggttg	aatggcttag	tccgctcatt	tgatggcgaa	cagatctttg	tggggaggtt	60
cagactttga	ttatgagaac	gaagccgata	cgaggaaggg	tccatggact	gtggaagagg	120
acatgcagct	tggtattgta	aatttgcacg	gagaaggacg	ctggaacttt	ctcgccagag	180
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ctgatctcaa	gcggagcaag	atcactcctg	aagaagaacg	tttgattatt	gaactccatc	300
gccgttgggg	aaataggtgg	tctcgtattg	cacaaagttt	accgggaagg	acggacaatg	360
aaatcaagaa	tttctggaga	actcgtatga	agggaaaact	aaactcagaa	actcagaagg	420
acatcgccgg	cgtggatgca	gacgacggag	tacagtttga	aagcgaattg	ggatcttgcc	480
gcctcccagt	tatttcatcc	catgcactgc	ctgaagtaga	cgttgcagag	ccttcgagta	540
ct						542

<210> 566
 <211> 358
 <212> DNA
 <213> Pinus radiata

<400> 566						
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agaggactac	ggcatttcag	catgaaagtt	tgtaagaaag	tggaagagcaa	gggctggaca	120
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ctttcacaag	atcagcaaca	gtttgatgag	aagaacatta	ggaggagggt	gtatgatgca	240
ctgaacgtac	tgatggccat	ggacataata	tcaaaggaga	aaaaggagat	tagatggaaa	300
gggctaccta	caacaaatct	aagtgcattt	gaacgggctaa	agactgagcg	aaagaggt	358

<210> 567
 <211> 722
 <212> DNA
 <213> Pinus radiata

<400> 567						
atgccccga	gcatttgcca	gggcttataa	cttgaagacg	cacatggcca	ctcatgaccc	60
caaccgtctt	aaacctcatg	tgtgccctca	ccgctcgtgt	gcgcggtcat	ttagccgcaa	120
gcatgacctc	gggcgtcact	tggtcagcat	tcatcgtgac	gattccgtgg	tttctacgcc	180
ctctgcgtca	atgaagtcta	ttggtgtcga	cagtggccgc	aggagtgggt	gtgacaactg	240
cggcaaagga	acaatcggcg	catcgtgcc	gtgttcattg	gccgatatca	agtagttgcg	300
gatcgcgttg	ctctgtttta	acactatgcg	tatatgccat	gggcgagtat	atttcgccac	360

<212> DNA

<213> Pinus radiata

<400> 571

cgtttctgga	agccctagaa	aagagagaag	aggatagaat	gatgagggaa	gaggcctgga	60
aaaggcagga	aatggcgaga	ttgaacaagg	atcaagaatt	aaggtctcag	gaacgttcta	120
tggctgcttc	aagggtttg	gcatta				146

<210> 572

<211> 767

<212> DNA

<213> Pinus radiata

<400> 572

gtcgccctgt	caaataatcc	cttgatcttc	agcgctaagg	ttgaaaatgg	tactcctagc	60
tatgatggtc	tgaagcatgc	taatacgaat	cctatgccat	tttctgggtt	gggtaatgtt	120
tccatgggccc	ctttgtttta	tcaagcaaat	ccaatccagc	gagtcaagag	agttagggac	180
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<210> 573

<211> 445

<212> DNA

<213> Pinus radiata

<400> 573

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atcatgatga	tgatgatcat	gggcatgggc	atgaggagga	ggtaattccc	caccctctgc	120
ttccccctcc	tggcgacact	tgtattgttc	catacatcat	gcccgtttcc	acctctaccg	180
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ccctcaagct	tataaagctt	cgaacagaat	ttgagcccag	gttttctcgc	agcggaagaa	360
agacggaact	ctgggacgaa	atagctgagt	ctctgcgaaa	agaacagttt	ttcagggacg	420
cccagcagtg	cagagacaaa	tggga				445

<210> 574

<211> 731

<212> DNA

<213> Pinus radiata

<400> 574

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atcagaattg	aggtgagaag	agcaggcaat	ctctgatcag	aagaattggg	tacttggaat	120
cgatggatca	gcagcagccc	acaataccag	cactacctca	agtgggttat	ggcacaatc	180
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cccacagcct	gcctctggcc	agaattaaga	agatcatgaa	ggcagacgag	gatgtgaaga	360
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acatagctgc	agccattggt	aggaccgata	tatttgattt	ccttggtgat	attgtgccta	540
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tgggtcctgg	ggataacgtg	ccatcttatt	actatgttgc	acagcaagct	cccaacgtgg	660
cggcttatgc	tcctcctact	cagcaaatga	ggtccaaagc	acccgcacct	cctcctcatg	720
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<210> 575
 <211> 441
 <212> DNA
 <213> Pinus radiata

<400> 575						
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gatgcagagc	agggagatgg	gcagtcattt	ggggcgtttc	ggaatgctct	agatggggaa	240
tttgtagcaa	atttggcaga	aagaaatggg	gataatagat	taggtatcgg	taattcactt	300
ggccttggat	ttgggtgaaag	agggcatagg	aatggagaag	tgggtagtaa	caagagtggg	360
gcagggggcg	tgcttggaact	ttctctgtct	cctactaatg	tcttcctaata	catgctgcca	420
tggatatggt	gaatcttgat	g				441

<210> 576
 <211> 271
 <212> DNA
 <213> Pinus radiata

<400> 576						
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gttgaacagc	ttaaggctga	gaaattgctc	ttgaaaagta	ggattgagaa	gaaagcatct	120
tattttcacg	aactcgaaga	acagattata	ggccttcaaa	atctgggtgaa	acgaaacgag	180
catagatata	gttcagggaa	tactccatct	gggggtgtat	cgttaccctt	catattggtc	240
cagactcatc	cccgtgccac	tggtgaaatt	g			271

<210> 577
 <211> 315
 <212> DNA
 <213> Pinus radiata

<400> 577						
gggatctgca	gagctaccag	acagaaaagt	ggtattctat	cttcagttct	ttctaaccag	60
aatgcccac	tcagtgtgct	tgctgctgca	gctagtgtct	ttgccacaaa	gagcatgttt	120
catgttttct	acaatccaag	gacaagtcca	gcagagttca	ttatacctta	tcagaaatat	180
gtgaaaagtt	gcaagcaacc	attgtctatt	ggaatgcgct	tcaaaatgag	atttgaaaca	240
gaggataccg	ctgagagaag	gtacactggc	atgataactg	caataggtga	tgcatatcct	300
gctagatggc	ctggt					315

<210> 578
 <211> 384
 <212> DNA
 <213> Pinus radiata

<400> 578						
caagataccc	actctgaacc	aatggctatg	gagatgggat	tagtcattga	cggagatagg	60
ttttcctcag	aggggtgatg	agatattatg	ttggatggcg	aggatctgtt	gccagaaatc	120
aacgatatgt	tttgggaaca	atttcttgca	gagagtgcaa	cgtcaggggg	aacggaagag	180
gctgagtctg	cagcgcagga	aagtcttacc	aaagatcagg	atgagaaacc	atctgaaaat	240
gggaattggt	ggaaaaaaa	tcaaaatatg	gataatctca	cggaaacagat	gggtcagctg	300

gcatcagaat caaatccttg agatttgtat cttgggatag atgcatattg tggagggag 360
gatttccttt cccaatttgg ctac 384

<210> 579
<211> 434
<212> DNA
<213> Pinus radiata

<400> 579
gcgatggagc tgtagggat gcagggaggg tagtgctgc cctttttctg gtgaagatgt 60
atcggttagt ggatgatccc tccacaaacc acatcgtttc ttggggagag aataacaaca 120
gcttcgtggt atggcgcccc aaagagttct ctgctctgt gctgccatgc tatttcaacc 180
acgccaattt ctccagcttt gtctgacagc tcaataatta tggatttcga aagacatttc 240
gcgggcagtg cgagttttcg aacaaattat tcgagaaggg caagcagtat ctcctttgtc 300
atatccatag aagaagagcg tccaatagct cgcccatgcc gatggaatat ggtaaatacat 360
ctttattatt cccaatcatt ctacctacac aacactccaa tggtctggca gcgcctctgc 420
cttcttctct gtca 434

<210> 580
<211> 322
<212> DNA
<213> Pinus radiata

<400> 580
aaggaacgga tcttaaccga agagaacctt tttcttcgta aaaagtgtgg tgatgaacat 60
gtggattgtt cggcttttag aacacctcca gcacaactta gaagcatcca gaacattgat 120
gtggagactc aactggttat aagacctcca actgtacaac agcaccctga cgtcgatagt 180
cctcgataac tgttgcatat gcaaattttc tactttcatg aaataaacaac acagtacacc 240
tcattttgtt cgctttttgt aaacgtataa ttactactgc atatgtaagc tttcctctca 300
aaaaaaaaaa aaaaaaaaaa aa 322

<210> 581
<211> 448
<212> DNA
<213> Pinus radiata

<400> 581
aggatccaaa tgcgccaaaag aaagccatga ctggatttat gttcttttct caagttgaaa 60
gagagaatct gaaaaagagt gaccaggaag tggcatttac tgatgtggga agaacacttg 120
gagaacggtg gaaaaaaatg tcagctgagg agaaagctcc ttacgaatca aaagccaggg 180
ctgataagga aaggtacaag gaagcaatgg ccgattacaa aagtgggtcca acaaatgtgg 240
actccgggaa tgaatctgat agtgaataga gcatcactac tacaagttca tattaacatg 300
gctagccgtg taaagtaatt gctttcattt aaatgctttc accctctggg gcaatctttt 360
tacattcact tgagaatatt gttggtgtac ttcacattag caaaaagcaa gcttacaact 420
gagtagtgct gagggatata cctacatg 448

<210> 582
<211> 321
<212> DNA
<213> Pinus radiata

<400> 582
accttctttt tggagtcaac atagattcct cgtctttgat tgctcctaata acagtatcaa 60
acatgaggag tattggcagc agtactgatg cagtcatgca atttggtggt tctaattatt 120
tgaatgcacc tccttggtgt tccgggtcca atatttcatt gaattcagac atcagtgttt 180
ctgcatgttt agatgaaagt ggactttttac caccgctga aaatttggga cagatgaatg 240
cacctacaag aaccttcata aaggtttata agcaagggtc agtcgggaga tcgctagata 300

tctcacgctt cagcagttat c

321

<210> 583

<211> 739

<212> DNA

<213> Pinus radiata

<400> 583

ctgaattcta	tccggttggg	tattaaatta	agggtgattgt	tcgctacaga	cgttctgtgg	60
acaccgagtg	agtctcctag	ccttggaatt	tggcaccatc	tcgtcccgca	gccatttcag	120
ttcgatctcc	cgccgtcaca	aaaaataatc	cccaattctc	cagctgtccc	tgccgtgtct	180
gcacgcgaca	ggtctgcccc	ggctttgggtc	tgtggaattt	catgccaatt	tatcacctat	240
aaactccacc	cgcatctgcc	cacaaacccc	acaagtcaca	cccctcttcg	tcttctttga	300
aatctcagat	gggttctgcc	aattagctcg	gatccttgcc	tcttcagttg	gttttgtgag	360
cacacacgag	gccaggaccc	gggtatcaac	gattcccctc	aactgacgta	acccatggcg	420
accactcggc	atcagcgagc	tcccgatagc	agccccgcgt	cggaggatga	atcaggagcg	480
cacacgtaca	gcaaccagga	tggttccgtg	aaggaacagg	atcgatttct	gcccattgct	540
aatgtgagca	gaatcatgaa	gaaagccctt	ccagctaatt	ccaagatatc	gaaagatgcc	600
aaggagacgg	tgcaggaatg	cgtttcagag	ttcatcagtt	tcatcactgg	ggaagcctct	660
gacaagtgtc	agagggagaa	gaagaagacc	atcaatgggg	acgacctgct	gtgggcaatg	720
ggaactctag	ggtttgaaa					739

<210> 584

<211> 413

<212> DNA

<213> Pinus radiata

<400> 584

aaatctgact	atcgggatag	tgatgatgaa	ggaggaggta	ctgttcgaga	aggaaaggat	60
ctgcaaacct	caaatttcat	cgattatttt	gggtcaaagta	atcatacaga	agaagcagaa	120
aatgagcatg	atgcatcagt	ggataccaaa	gggcccctgg	aatccagcaa	tgaagtcggc	180
catcctacca	cataccccga	atcttcttca	ttgtcagcgc	aaggctctga	gcctcgagtt	240
ttttcctgta	attactgcca	gagaaaattc	tacagctcgc	aggccttagg	aggccatcag	300
aatgctcaca	agcgagaacg	caccttggca	aagagggggc	aaagaattgg	ggcttttcaa	360
cacaggtaca	taagcatggc	atccctgcct	ctccatggct	ctacagaatc	agc	413

<210> 585

<211> 622

<212> DNA

<213> Pinus radiata

<400> 585

ggcttagggg	aaaagctttg	aaattatttg	ggtttgagtt	tagaggggtca	gaaggtggat	60
catttgagg	gactaatggt	tctgatcagc	cacaagatgg	gactaatata	ttaactgcag	120
gtgaagcatc	cactgagcca	gtggaggaag	aactagtgtg	tgaggccaaa	aatggagatt	180
cagggaaatt	agaagatgtg	ggtagtccag	tagaggctgg	agaaagtggg	agcactagca	240
attgcttggg	atcatctgct	caagaaaaatc	ggaaatatga	atgccaatac	tggtgcagag	300
agtttgcaaa	ttcgcaggct	ctcggggggc	atcaaaatgc	gcacaaaaaa	gagagacagc	360
aggccaaacg	cgcgcacctg	ctggccacca	ggagcgctgc	tgcgagtggc	aacagaagtg	420
gcgccactgc	atgggtgcggg	aacataaacg	gtaacctcta	ccatagaaat	ttccttttca	480
ataattccta	cttcacacgc	atgcaggtgt	ttcaagaaga	tttcccgacc	tttcagaccc	540
cacaggctgt	tgcagctcca	tcaatcccgc	attatatctt	cagttaccag	cagcagcagc	600
aggcgcccgt	gcagagtcgc	tg				622

<210> 586

<211> 349

<212> DNA

<213> Pinus radiata

<400> 586

tgtaccggaa	aattccaaac	aaataatcaa	ccatggactc	atattgccgg	agatgggctc	60
agtggacagc	gggcgcgaag	gcacgagagc	aattttgtcc	gatgattgtg	tgaaattcga	120
atgccgatat	tgttgtaggg	ttttcccgac	gtctcaggct	ctcggcggcc	accagaacgc	180
ccataaacga	gaacggcgcc	gggcaatgac	gaggtttcag	agatcgccct	ctgacagttc	240
aaactattca	ggaaaacaga	atagtattga	tctgttttagc	cgtgagagag	ttcccgggtc	300
ttctctcctt	tcaccacacg	gtacgagggg	tcattgttgtt	tgcagtgc		349

<210> 587

<211> 368

<212> DNA

<213> Pinus radiata

<400> 587

aaaaaggcgt	cagaatgggg	tgagtctgta	gtaagtacaa	gcgaaaacag	taatgacttg	60
gacccctcta	cttattctga	aacctcttcc	cctgctcaag	gatctgatcc	tcgggttttc	120
ccctgtaatt	tctgtcaaag	caaattctac	agttctcaag	cattaggagg	tcatcaaaat	180
gcccataagc	gtgagagaac	tttggttaga	agggcacaga	gaatggggtc	ttttgcacaa	240
agatattcaa	gcatggcatc	acttccactc	cacggttcct	cggaaacaag	ttggacgccc	300
agtcggtttt	tagggataaa	agcacattct	ttgattcaca	aacctttccc	tgaaggatgat	360
aacctgcc						368

<210> 588

<211> 516

<212> DNA

<213> Pinus radiata

<400> 588

ttcagatcta	taaatcaatg	tctgcattaa	tgacaaacta	agttgaaatt	cccaaattgtt	60
ggtggttact	atttaggatc	ggacattagg	cgttgtggtc	tcgggttcga	ttcacaaggc	120
atttctgttt	cggaatttca	aagcaacacg	tatcagaaaa	ctgattctat	actgtgatga	180
cgcaggctac	taactacaca	gcaggtagca	tcagagacga	tcaagaggag	caatgtgtga	240
ggaggggacc	ttggactggt	gatgaggaca	tgagccttat	tcgatgcgta	accacccggg	300
gtgaaggctg	atggaacaca	gtagccaaat	ttgcagggtc	aaagagaaca	ggaaagagct	360
gcagattgag	atggcttaat	tatcttcggc	ccgatgttaa	acgtggaaac	ataacgccgg	420
aagagcagct	attaatcctt	gaactccacc	gtctctgggg	taacagatgg	tccaagattg	480
cacggcaact	cccaggcagg	actgacaacg	aaatca			516

<210> 589

<211> 340

<212> DNA

<213> Pinus radiata

<400> 589

gagaactagt	ctcgaagttag	ttatttgatt	catattgggtt	gcagaggatt	ttcagagatt	60
gatgatgagt	gctgaagctg	ctatggagag	ggagagtgtg	ttcatggatg	aaatgcgcag	120
gccgcagagg	aagaagaaga	ccgacgcaga	ggatgatttt	gacgagtgtt	attatactca	180
tatgtgcaag	atttgcaaga	agaagttcgt	ctcagggcgg	gcttttggcg	gtcatatgag	240
aattcatggc	cctgtggcca	ctgccgccgc	cgccgctgct	gagagcaatg	ggaaaaatct	300
ggagccgcag	aggaagagat	cccgtgctga	agagattcga			340

<210> 590

<211> 391

<212> DNA

<213> Pinus radiata

<400> 590
 gttgggtgta aaggggtctga cgcgtttgag gagagcttga agcatttttg tagagtttgc 60
 aagaggagat ttgcttgtgg gagggctctg ggtggtcata tgagagtaca tggagctgaa 120
 ttgggtgcaa ttaaggggtg tggtttggaa gagcagtttg agaaggggag ggtgaaggag 180
 cccagtagga gttgtggtga ttctgtcaag gaaggagtgc aggatgaggt agagggcttg 240
 aattctatgt acactttgag gaggaacccg aagcgaagct ggaggtttgc agatcaggat 300
 tactcttttg cctttggggg agtagatggg tctggggcta agagatttgg gtctacattt 360
 ttgagggatt caagagtctg tgaggagtgt g 391

<210> 591
 <211> 260
 <212> DNA
 <213> Pinus radiata

<400> 591
 acgaaattac cttggggagt atactggaga gttgatttca catcggaag ctgataagcg 60
 aggaaagatt tatgatcgag aagactcctc cttccttttc aacttgaacg atcagtatgt 120
 tcttgatgca taccggaagg gggataagtt gaaatttgca aatcattcac caactccaaa 180
 ttgctatgca aaggtgatta tggttgctgg tgatcataga gtgggtattt ttgcaaagga 240
 acgcattgca gccggtgagg 260

<210> 592
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

<400> 592
 Met Gly Glu Arg Asp Asp Leu Gly Leu Ser Leu Ser Leu Ser Phe Pro
 1 5 10 15
 Gln Gly His Leu His Gln Gln Gln Gln Gln Gln Gln Ser Leu
 20 25 30
 Gln Leu Asn Leu Met Pro Ser Leu Val Pro Ser Ser Ala Ser Ser Ala
 35 40 45
 Gln Ser Gly Phe Asn Leu Gln Lys Arg Ser Cys Asn Asp Ala Phe Pro
 50 55 60
 Ser Ser Ser Asp Arg Asn Ser Glu Ala Arg Ser Phe Leu Arg Gly Ile
 65 70 75 80
 Asp Val Asn Arg Glu Pro Ser Ala Gly Ala Ala Ala Asp Tyr
 85 90

<210> 593
 <211> 44
 <212> PRT
 <213> Eucalyptus grandis

<400> 593
 Asp Lys Ala Arg Leu Val Gln Glu Thr Gly Leu Gln Leu Lys Gln Ile
 1 5 10 15
 Asn Asn Trp Phe Ile Asn Gln Arg Lys Arg Asn Trp His Ser Asn Pro
 20 25 30
 Ser Thr Ser Thr Val Leu Lys Ser Lys Arg Lys Arg
 35 40

<210> 594
 <211> 291
 <212> PRT


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<400> 596
Gln Asn Gly Pro Ser Met Pro Pro Val Gln Pro Phe Val Arg Ala Glu
 1          5          10          15
Met Leu Pro Ser Gly Tyr Leu Val Arg Pro Cys Glu Gly Gly Gly Ser
          20          25          30
Ile Ile Arg Ile Val Asp His Leu Asp Leu Glu Pro Trp Ser Val Pro
          35          40          45
Glu Val Leu Arg Pro Leu Tyr Glu Ser Ser Thr Met Leu Ala Gln Lys
          50          55          60
Thr Thr Met Ala Ala Leu Arg Gln Leu Arg Gln Ile Ala Gln Glu Val
          65          70          75          80
Ser Gln Pro Asn Val Ser Gly Trp Gly Arg Arg Pro Ala Ala Leu Arg
          85          90          95
Ala Leu Ser Gln Arg Leu Ser Arg Gly Phe Asn Glu Ala Leu Asn Gly
          100          105          110
Phe Thr Asp Glu Gly Trp Ser Ile Met Gly Asn Asp Gly Ile Asp Asp
          115          120          125
Val Thr Ile Leu Val Asn Ser Ser Pro Asp Lys Leu Met Gly Leu Asn
          130          135          140
Leu Ser Phe Ser Asn Gly Phe Pro Ala Val Ser Asn Ala Val Leu Cys
          145          150          155          160
Ala Arg Ala Ser Met Leu Leu Gln Asn Val Pro Pro Ala Val Leu Leu
          165          170          175
Arg Phe Leu Arg Glu His Arg Ser Glu Trp Ala Asp Asn Ser Ile Asp
          180          185          190
Ala Tyr Ser Ala Ala Ala Val Lys Val Gly Ser Cys Ala Leu Pro Gly
          195          200          205
Ser Arg Ile Gly Ser Phe Gly Gly Gln Val Ile Leu Pro Leu Ala His
          210          215          220
Thr Ile Glu His Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Gly Met
          225          230          235          240
Gly His Ser Pro Glu Asp Ala Leu Met Pro Arg Asp Ile Phe Phe Leu
          245          250          255
Gln Met Cys Ser Gly Val Asp
          260

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<210> 597

<211> 134

<212> PRT

<213> Eucalyptus grandis

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<400> 597
Cys Pro Ile Asp Ser Gly Arg Ser Phe Asp Thr Ser Leu Ser Leu Gly
 1          5          10          15
Leu Gly Cys Tyr Gly Asp Pro Glu Asp His Glu Ile Lys Ile Lys Lys
          20          25          30
Pro Leu Ala Lys Leu Ser Gly Asn Ser Thr Cys Leu Thr Ile Gly Leu
          35          40          45
Pro Gly Gly Glu Ala Cys Gly Leu Gly Ser Ala Ser Gly Asp Glu Val
          50          55          60
Arg Asn Ile Pro Ser Arg Ser Ala Ser Ser Phe Ser Asn Ser Ser Ser
          65          70          75          80
Ala Lys Arg Glu Lys Ala Glu Gln Gly Glu Glu Glu Ala Val Glu Arg
          85          90          95
Gly Thr Gly Ser Pro Arg Ala Thr Ile Asn Ile Glu Asp Glu Asp Glu
          100          105          110

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Asn	Lys	Ser	Leu	Leu	Gln	Asp	Trp	Thr	Asn	Leu	Ile	Lys	His	Leu	Arg
			165						170					175	
Glu	Asp	Asp	Pro	His	Phe	Gly	Met	Val	Asp	Asn	Gly	Arg	Asp	Tyr	Glu
			180					185					190		
Ala	Val	Ile	Gly	Tyr	Thr	Asp	Ala	Ala	Ala	Ala	Ala	Arg	Leu	Tyr	Thr
			195				200					205			
Leu	Arg	Leu	Gln	Pro	Asp	Gln	Pro	Asn	Leu	Thr	Ser	Gly	Gly	Gly	Ser
			210			215					220				
Glu	Ile	Thr	Thr	Tyr	Pro	Leu	Leu	Glu							
225					230										

<210> 602

<211> 113

<212> PRT

<213> Eucalyptus grandis

<400> 602

Met	Ser	Gln	Lys	Gly	Leu	Ile	Tyr	Ser	Phe	Val	Ala	Lys	Gly	Thr	Val
1				5					10					15	
Val	Leu	Ala	Glu	His	Thr	Gln	Phe	Ser	Gly	Asn	Phe	Ser	Thr	Ile	Ala
			20					25					30		
Val	Gln	Cys	Leu	Gln	Lys	Leu	Pro	Ser	Asn	Ser	Ser	Lys	Tyr	Thr	Tyr
			35				40					45			
Ser	Cys	Asp	Gly	His	Thr	Phe	Asn	Phe	Leu	Thr	Asp	Ser	Gly	Phe	Val
			50			55					60				
Phe	Leu	Val	Val	Ala	Asp	Glu	Ser	Val	Gly	Arg	Ser	Val	Pro	Phe	Val
65					70					75					80
Phe	Leu	Glu	Arg	Val	Lys	Asp	Asp	Phe	Met	Gln	His	Tyr	Ser	Ala	Ser
				85					90					95	
Ile	Ala	Ser	Gly	Asp	Pro	His	Pro	Leu	Ala	Asp	Asp	Asp	Glu	Asp	Asp
			100					105					110		
Asp															

<210> 603

<211> 111

<212> PRT

<213> Eucalyptus grandis

<400> 603

Met	Gly	Arg	Gly	Arg	Val	Glu	Leu	Lys	Arg	Ile	Glu	Asn	Lys	Ile	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Tyr	Glu	Leu	Ser	Val	Leu	Cys	Asp	Val	Glu	Val	Ala	Leu	Leu	Ile	Phe
			35				40					45			
Ser	Ser	Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Gly	Ser	Ala	Gly	Pro	Ser	Gly
			50			55					60				
Ile	Asn	Lys	Thr	Leu	Glu	Arg	Tyr	Gln	Arg	Asp	Asn	Phe	Thr	Pro	Gln
65					70					75					80
Asp	Asn	Val	Ala	Glu	His	Glu	Thr	Gln	Gln	Asn	Trp	Phe	Gln	Glu	Ile
				85					90					95	
Ser	Lys	Leu	Lys	Ala	Lys	Tyr	Glu	Leu	Phe	Asn	Lys	Leu	Gln	Lys	
			100					105					110		

<210> 604

<211> 65

<212> PRT
 <213> Eucalyptus grandis

<400> 604
 Leu Leu Gln Lys Ser Ser Gln Glu Glu Asp Lys Ala Arg Leu Val Gln
 1 5 10 15
 Asp Thr Gly Leu Gln Leu Thr Gln Ile Asn Asn Trp Phe Ile Asn Gln
 20 25 30
 Arg Lys Arg Asn Trp His Ser Asn Pro Ser Ser Ser Thr Val Pro Lys
 35 40 45
 Ser Lys Arg Lys Arg Ser His Ala Gly Asp Pro Asp Lys Glu Arg Pro
 50 55 60
 Met
 65

<210> 605
 <211> 60
 <212> PRT
 <213> Eucalyptus grandis

<400> 605
 Cys Ile Glu Thr Lys Ala Arg Phe Gly Lys Ser Val Glu Ser Pro Ala
 1 5 10 15
 Thr Asp Lys Trp Lys Val Trp Phe Gln Asn Arg Arg Ala Arg Thr Lys
 20 25 30
 Leu Lys Gln Thr Ala Val Glu Cys Glu Met Leu Gln Lys Cys Cys Glu
 35 40 45
 Thr Leu Lys Glu Ala His Ser Arg Leu Gln Lys Glu
 50 55 60

<210> 606
 <211> 188
 <212> PRT
 <213> Eucalyptus grandis

<400> 606
 Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Met Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Leu Val Asp Lys Leu Thr Ala Asp Asn Arg Ile Tyr His Lys
 20 25 30
 Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu Gly Asn
 35 40 45
 Tyr Asn Ser Phe Glu Gly Val Leu Tyr Cys Arg Pro His Phe Asp Gln
 50 55 60
 Leu Phe Lys Arg Thr Gly Ser Leu Glu Lys Ser Phe Glu Gly Thr Pro
 65 70 75 80
 Lys Ile Ala Lys Pro Glu Lys Pro Val Asp Gly Glu Arg Pro Ala Ala
 85 90 95
 Thr Lys Ala Ser Ser Met Phe Gly Gly Thr Arg Asp Lys Cys Val Gly
 100 105 110
 Cys Lys Ser Thr Val Tyr Pro Thr Glu Lys Val Thr Val Asn Gly Thr
 115 120 125
 Pro Tyr His Lys Ser Cys Phe Lys Cys Thr His Gly Gly Cys Val Ile
 130 135 140
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Lys Leu Tyr Cys Arg His
 145 150 155 160
 His His Thr Gln Leu Ile Lys Glu Lys Gly Asn Leu Ser Gln Leu Glu

[illegible][illegible]

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<210> 630
<211> 62
<212> PRT
<213> Eucalyptus grandis
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Cys 1	Trp	His	His	Val 5	His	Thr	Gln	Cys	Gly 10	Lys	Ala	Gly	Phe	Gly 15	Met
Leu	Lys	Gln	Glu	Asn	Leu	Ser	Asn	Glu	Leu	Asp	Arg	Val	Lys	Lys	Glu
			20					25					30		
Asn	Asp	Asn	Leu	Gln	Ile	Gln	Leu	Arg	His	Leu	Arg	Gly	Arg	His	Asn
			35				40					45			
Ile	Thr	Glu	Pro	Gln	Arg	Ala	Asp	Asn	Pro	Arg	Arg	His	Ser		
	50					55				60					

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<210> 631
<211> 113
<212> PRT
<213> Eucalyptus grandis
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[illegible]

<210> 632

<211> 393
 <212> PRT
 <213> Eucalyptus grandis

<400> 632

Met	Val	Glu	Gly	Glu	Arg	Asn	Gly	Asp	Asp	Asp	Gly	Ala	Ser	Gln	Gly
1				5				10						15	
Glu	Gln	Gln	Trp	Lys	His	Gln	Gln	Ala	Leu	Asp	Arg	Leu	Gly	Lys	Tyr
			20					25					30		
Val	Arg	Tyr	Thr	Ala	Glu	Gln	Val	Glu	Ala	Leu	Glu	Arg	Val	Tyr	Ser
		35					40					45			
Glu	Cys	Pro	Lys	Pro	Ser	Ser	Leu	Arg	Arg	Gln	Gln	Leu	Ile	Arg	Glu
	50					55					60				
Cys	Pro	Ile	Leu	Ser	Asn	Ile	Glu	Pro	Lys	Gln	Ile	Lys	Val	Trp	Phe
65					70					75					80
Gln	Asn	Arg	Arg	Cys	Arg	Glu	Lys	Gln	Arg	Lys	Glu	Ala	Ser	Arg	Leu
				85					90					95	
Gln	Thr	Val	Asn	Arg	Lys	Leu	Thr	Ala	Met	Asn	Lys	Leu	Leu	Met	Glu
			100					105					110		
Glu	Asn	Asp	Arg	Leu	Gln	Lys	Gln	Val	Ser	Gln	Leu	Val	Cys	Glu	Asn
		115					120					125			
Gly	Tyr	Met	Arg	Gln	Gln	Leu	His	Thr	Thr	Ser	Ala	Thr	Thr	Thr	Asp
		130				135					140				
Ala	Ser	Cys	Asp	Ser	Val	Val	Thr	Thr	Pro	Gln	His	Ser	Leu	Arg	Asp
145					150					155					160
Ala	Asn	Asn	Pro	Ala	Gly	Leu	Leu	Ser	Ile	Ala	Glu	Glu	Thr	Leu	Ala
				165					170					175	
Glu	Phe	Leu	Ser	Lys	Ala	Thr	Gly	Thr	Ala	Val	Asp	Trp	Val	Gln	Met
		180						185					190		
Pro	Gly	Met	Lys	Pro	Gly	Pro	Asp	Ser	Val	Gly	Ile	Phe	Ala	Ile	Ser
		195					200					205			
Gln	Ser	Cys	Ser	Gly	Val	Ala	Ala	Arg	Ala	Cys	Gly	Leu	Val	Ser	Leu
		210				215					220				
Glu	Pro	Thr	Lys	Ile	Val	Glu	Ile	Leu	Lys	Asp	Arg	Thr	Ser	Trp	Phe
225					230					235					240
Arg	Asp	Cys	Arg	Ser	Leu	Glu	Val	Phe	Thr	Met	Phe	Pro	Ala	Gly	Asn
				245					250					255	
Gly	Gly	Thr	Ile	Glu	Leu	Val	Tyr	Thr	Gln	Ile	Tyr	Ala	Pro	Thr	Thr
			260					265					270		
Leu	Ala	Pro	Ala	Arg	Asp	Leu	Trp	Thr	Leu	Arg	Tyr	Thr	Thr	Thr	Leu
		275					280					285			
Glu	Asn	Gly	Ser	Leu	Val	Val	Cys	Glu	Arg	Ser	Leu	Ser	Gly	Ser	Gly
	290					295					300				
Ala	Gly	Pro	Asn	Pro	Ala	Ser	Ala	Ala	Gln	Phe	Val	Arg	Ala	Glu	Ile
305					310					315					320
Leu	Pro	Ser	Gly	Tyr	Leu	Ile	Arg	Pro	Cys	Glu	Gly	Gly	Gly	Ser	Ile
				325					330					335	
Ile	His	Ile	Val	Asp	His	Leu	Asn	Leu	Glu	Ala	Trp	Ser	Val	Pro	Glu
			340					345					350		
Val	Leu	Arg	Pro	Leu	Tyr	Glu	Ser	Ser	Lys	Val	Val	Ala	Gln	Arg	Ile
		355				360						365			
Thr	Ile	Ala	Ala	Leu	Arg	Tyr	Ile	Arg	Gln	Ile	Ala	Gln	Glu	Thr	Ser
	370					375					380				
Gly	Glu	Val	Val	Tyr	Gly	Leu	Gly	Arg							
385					390										

<210> 633

<211> 84
 <212> PRT
 <213> Eucalyptus grandis

<400> 633
 Met Gly Ile Asp Asp Leu Cys Asn Thr Gly Leu Val Leu Ser Leu Gly
 1 5 10 15
 Leu Glu Thr Pro Phe Lys Ile Glu Ala Gln Arg Gln Ala Lys Gln Arg
 20 25 30
 Leu Asn Phe Glu Pro Ser Leu Thr Leu Cys Leu Ser Gly Thr Thr Lys
 35 40 45
 Ala Thr Arg Asp Glu Gln Pro Pro Ala Asp His Leu Tyr Arg Gln Ala
 50 55 60
 Ser Pro His Ser His Asn Ser Leu Ser Ala Val Ser Ser Phe Ser Ser
 65 70 75 80
 Pro Arg Val Lys

<210> 634
 <211> 67
 <212> PRT
 <213> Eucalyptus grandis

<400> 634
 Glu Ser Gly Glu Ala Arg Arg Leu Arg Asp Ser Leu Val Glu Met Ala
 1 5 10 15
 Asn Val Gly Lys Ser Pro Ser Met Leu Thr Glu Cys Gly Leu Ala Glu
 20 25 30
 Asn Ser Leu Val Ser Ile Ala Glu Arg Val Thr His His Arg Trp Ser
 35 40 45
 Trp Ser Glu Val Lys Tyr Leu Ser Asp Cys His Leu Met Ala Leu Asp
 50 55 60
 Ala Ser Leu
 65

<210> 635
 <211> 103
 <212> PRT
 <213> Eucalyptus grandis

<400> 635
 Tyr Ser Glu Ala Ser Ser Asp Glu Gly Asn Gln Tyr Ser Thr Arg Glu
 1 5 10 15
 Glu Glu Gly Glu Ile Glu Glu Phe Glu Glu Asp Thr Tyr Ser Gly Ala
 20 25 30
 Pro Gly Ala Leu Pro Ile Asn Lys Asp Gln Ser Asp Glu Asp Val Pro
 35 40 45
 Ala Glu Glu Cys Asp Glu Tyr Pro Trp Thr Ser Glu Arg Thr Arg Asn
 50 55 60
 Asn His Leu Pro Glu Glu Ala Gly Phe Ser Gly Ser Ser Ala Asp Ser
 65 70 75 80
 Pro Arg Gly Ile Arg Met Ala Ser Pro Ser Ala Ser Ser Gln Lys Phe
 85 90 95
 Gly Ser Leu Ser Ala Leu Asp
 100

<210> 636

<211> 299
 <212> PRT
 <213> Eucalyptus grandis

<400> 636

Met	Ala	Phe	His	Asn	His	Leu	Ser	His	Gln	Asp	Leu	Ser	Ser	Leu	His
1				5					10					15	
His	Phe	Ala	Ala	Asp	Gln	Gln	Pro	Pro	Pro	Pro	Gln	His	Gln	Gln	Gln
			20					25					30		
Gln	Gln	His	Leu	Pro	Asp	Ser	Ser	Ser	Ser	Val	His	His	Gln	Leu	His
		35					40					45			
His	Ala	Ala	Gly	Pro	Asn	Trp	Leu	Asn	Thr	Ala	Leu	Leu	Arg	Ser	Asp
	50					55					60				
Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gly	Gly	Asn	Ser	Phe	Leu	Asn
65					70					75					80
Leu	His	Thr	Ser	Ser	Asp	Ser	Ala	Ala	Ser	Pro	Gln	Ala	Gln	Gln	Gln
				85					90					95	
Pro	Pro	Ala	Thr	Ser	Ala	Ser	Ala	Ala	Ala	Gly	His	His	Gln	Trp	Leu
			100					105					110		
Ser	Arg	Gln	His	Ser	Ser	Leu	Leu	Gln	Arg	Asn	His	Ser	Glu	Val	Ile
		115					120					125			
Asp	Ala	Asp	Ser	Ile	Ile	Asp	Ser	Ala	Asp	Leu	Lys	Glu	Ser	Val	Ser
	130					135					140				
Lys	Gly	Asp	Gly	Gly	Gly	Gly	Gly	Ala	Ala	Glu	Ser	Asn	Trp	Glu	Asn
145					150					155					160
Ala	Lys	Tyr	Lys	Ala	Glu	Ile	Leu	Ala	His	Pro	Leu	Tyr	Glu	Gln	Leu
			165						170					175	
Leu	Ser	Ala	His	Val	Ala	Cys	Leu	Arg	Ile	Ala	Thr	Pro	Val	Asp	Gln
			180					185					190		
Leu	Pro	Arg	Ile	Asp	Ala	Gln	Leu	Ala	Gln	Ser	Gln	His	Val	Val	Ala
		195					200					205			
Lys	Tyr	Ser	Ala	Met	Ser	Gln	Gly	Leu	Val	Ala	Asp	Asp	Lys	Glu	Leu
	210					215					220				
Asp	Gln	Phe	Met	Thr	His	Tyr	Val	Leu	Leu	Leu	Cys	Ser	Phe	Lys	Glu
225					230					235					240
Gln	Leu	Gln	Gln	His	Val	Arg	Val	His	Ala	Met	Glu	Ala	Val	Met	Ala
				245					250					255	
Cys	Trp	Glu	Ile	Glu	Gln	Ser	Leu	Gln	Ser	Leu	Thr	Gly	Val	Ser	Pro
			260					265					270		
Gly	Glu	Gly	Thr	Gly	Ala	Thr	Met	Ser	Asp	Asp	Glu	Asp	Asp	Gln	Val
		275					280					285			
Asp	Ser	Asp	Ala	Asn	Leu	Phe	Asp	Gly	Ser	Leu					
	290						295								

<210> 637
 <211> 91
 <212> PRT
 <213> Eucalyptus grandis

<400> 637

Met	Gly	Arg	Arg	Lys	Ile	Glu	Ile	Gln	Pro	Ile	Thr	His	Glu	Arg	Asn
1				5					10					15	
Arg	Ser	Val	Thr	Phe	Leu	Lys	Arg	Lys	Asn	Gly	Leu	Phe	Lys	Lys	Ala
			20					25					30		
Tyr	Glu	Leu	Gly	Val	Leu	Cys	Ser	Val	Asp	Val	Ala	Val	Ile	Ile	Phe
		35					40					45			
Glu	Asp	Arg	Pro	Gly	His	Ser	Pro	Lys	Leu	Tyr	Gln	Tyr	Ser	Ser	Arg

Tyr	Cys	Val	Val	Ala	Ala	Glu	Ser	Ala	Gly	Arg	Gln	Ile	Pro	Ile	Ala
65					70					75					80
Phe	Leu	Glu	Arg	Ile	Lys	Asp	Asp	Phe	Asn	Lys	Arg	Tyr	Gly	Gly	Gly
				85					90					95	
Lys	Ala	Thr	Thr	Ala	Ala	Ala	Asn	Ser	Leu	Asn	Arg	Glu	Phe	Gly	Pro
			100				105						110		
Lys	Leu	Lys	Glu	His	Met	Gln	Tyr	Cys	Val	Asp	His	Pro	Glu	Glu	Ile
		115					120					125			
Ser	Lys	Leu	Ala	Lys	Val	Lys	Ala	Gln	Val	Ser	Glu	Val	Lys	Gly	Val
	130					135					140				
Met	Met	Glu	Asn	Ile	Glu	Lys	Val	Leu	Asp	Arg					
145					150					155					

<210> 643

<211> 54

<212> PRT

<213> Eucalyptus grandis

<400> 643

Glu	Trp	Trp	Ser	Val	His	Asn	Lys	Trp	Pro	Tyr	Pro	Thr	Glu	Ala	Asp
1				5					10					15	
Lys	Ile	Ala	Leu	Ala	Lys	Ser	Thr	Gly	Leu	Asp	Gln	Lys	Gln	Ile	Asn
			20					25					30		
Asn	Trp	Phe	Ile	Asn	Gln	Arg	Lys	Arg	His	Trp	Lys	Pro	Ser	Glu	Ile
		35					40					45			
Thr	His	Tyr	Lys	Val	Ile										
															50

<210> 644

<211> 308

<212> PRT

<213> Eucalyptus grandis

<400> 644

Met	Ala	Met	Gln	Thr	Gly	Ile	Gly	Leu	Ser	Lys	Ile	Leu	Val	Leu	Ala
1				5				10						15	
Gly	Ala	Gly	Tyr	Thr	Gly	Thr	Ile	Leu	Phe	Gln	Asn	Gly	Lys	Leu	Ser
			20					25					30		
Asp	Leu	Leu	Gly	Glu	Leu	Gln	Gly	Leu	Val	Lys	Gly	Leu	Glu	Lys	Ser
		35					40					45			
Gly	Ser	Gln	Ser	Asp	Gly	Asp	Lys	Asp	Tyr	Ser	Asp	Ala	Val	Ala	Ala
	50					55					60				
Gln	Val	Arg	Arg	Leu	Ala	Met	Glu	Val	Arg	Gln	Leu	Ala	Ser	Ala	Arg
65				70					75						80
Gln	Ile	Thr	Val	Leu	Asn	Gly	Asn	Ser	Ser	Gln	Met	Gly	Asn	Leu	Thr
			85					90					95		
Asn	Met	Val	Val	Pro	Ala	Ala	Thr	Leu	Gly	Ala	Leu	Gly	Tyr	Gly	Tyr
		100						105					110		
Met	Trp	Trp	Lys	Gly	Leu	Ser	Phe	Ser	Asp	Leu	Met	Tyr	Val	Thr	Lys
		115					120					125			
Arg	Gly	Met	Ala	Asn	Cys	Val	Ala	Asn	Leu	Thr	Gln	His	Leu	Glu	His
	130					135					140				
Val	Ser	Glu	Ala	Leu	Asn	Ser	Val	Lys	Lys	His	Leu	Thr	Gln	Arg	Ile
145					150					155					160
Glu	Asn	Leu	Asp	Gly	Lys	Met	Asp	Asp	Gln	Arg	Glu	Leu	Ser	Lys	Glu
			165					170						175	
Ile	Lys	Asn	Glu	Val	Ser	Ser	Val	Lys	Ala	Asn	Leu	Asp	Gly	Leu	Gly

			180					185				190			
Asp	Asp	Leu	Asp	Phe	Leu	Gln	Arg	Met	Val	Ser	Gly	Leu	Asp	Val	Arg
		195					200					205			
Met	Gly	Ser	Leu	Glu	Tyr	Lys	Gln	Asp	Trp	Ala	Asn	Glu	Gly	Val	Arg
	210					215					220				
Tyr	Leu	Cys	Gly	Val	Ala	Ser	Gly	Gln	Lys	Val	Glu	Met	Pro	Lys	Met
225					230					235					240
Leu	Gln	Glu	Gln	Ile	Lys	Ile	Ser	Gly	Thr	Ser	Arg	Gly	Leu	Leu	Ser
				245					250					255	
Tyr	Gln	Asp	Thr	Pro	Ser	Leu	Lys	Gly	Leu	Lys	Glu	Ile	Ala	Asp	Ala
			260					265					270		
Leu	Thr	Leu	Ser	Ile	Asp	Arg	Ser	Ala	Ser	Asp	Ala	Val	Val	Gln	Asp
		275					280					285			
Gly	Val	Glu	Arg	Leu	Asn	Gly	Lys	Pro	Lys	Pro	Leu	Pro	Arg	Ala	Ser
	290					295					300				
Ser	Thr	Thr	Cys												
305															

<210> 645
 <211> 197
 <212> PRT
 <213> Eucalyptus grandis

Met	Glu	Glu	Tyr	Gly	Gln	Met	Asn	Glu	Asn	Ser	Ser	Thr	Gly	Ser	Arg
1				5				10					15		
Gly	Asn	Asn	Ser	Phe	Leu	Tyr	Ala	Ser	Pro	Val	Leu	Gly	Pro	Ser	Ser
		20					25					30			
Ser	Gly	Asn	Ser	Asn	Tyr	Gly	Arg	Gly	Asn	Ser	Ser	Gly	Gly	His	Phe
	35					40						45			
Tyr	Ser	Gln	Ser	Gly	Asp	His	Cys	Phe	Gln	Ser	Glu	Ala	Pro	Pro	His
	50				55						60				
Pro	Val	Val	Lys	Thr	Glu	Ala	Thr	Thr	Ser	His	His	Gly	His	Ala	Gln
65				70					75						80
Lys	Phe	His	His	Tyr	Ser	Leu	Val	Arg	Asp	His	His	Asp	Pro	Ser	Ala
			85					90					95		
Ser	His	His	His	His	His	Gln	His	His	Gln	His	Gln	Gln	Leu	Gln	Thr
			100				105						110		
Ala	Ser	Glu	Ser	Ser	Arg	Glu	Val	Asp	Ala	Met	Lys	Ala	Lys	Ile	Ile
		115				120						125			
Ala	His	Pro	Gln	Tyr	Ser	Asn	Leu	Leu	Glu	Ala	Tyr	Met	Asp	Cys	Gln
	130				135						140				
Lys	Val	Gly	Ala	Pro	Pro	Glu	Val	Val	Ala	Lys	Leu	Ser	Val	Ala	Arg
145				150					155						160
Gln	Glu	Phe	Glu	Ser	Arg	Gln	Arg	Ser	Ser	Val	Ala	Ser	Ala	Asp	Gly
			165					170					175		
Ser	Lys	Asp	Pro	Glu	Leu	Asp	Gln	Phe	Met	Glu	Ala	Tyr	Tyr	Asp	Met
		180					185						190		
Leu	Val	Lys	Tyr	Arg											
195															

<210> 646
 <211> 304
 <212> PRT
 <213> Eucalyptus grandis

<400> 646

Asn	Gly	Ala	Ser	Leu	Tyr	Ser	Met	Gln	Ala	Ile	Leu	Ala	Asp	Glu	Met
			100					105					110		
Gly	Leu	Gly	Lys	Thr	Ile	Gln	Ala	Ile	Thr	Tyr	Leu	Thr	Leu	Leu	Lys
		115					120					125			
His	Leu	Asn	Asn	Asp	Pro	Gly	Pro	His	Leu	Val	Val	Cys	Pro	Ala	Ser
		130				135					140				
Leu	Leu	Glu	Asn	Trp	Glu	Arg	Glu	Leu	Lys	Arg	Trp	Cys	Pro	Ser	Phe
145					150					155					160
Ser	Val	Leu	Gln	Tyr	His										
				165											

<210> 648
 <211> 142
 <212> PRT
 <213> Eucalyptus grandis

Met	Phe	Met	Val	Asp	Asp	His	Ala	Leu	Cys	Leu	Ser	Cys	Asn	Cys	Thr
1				5					10					15	
Phe	Asn	Ile	Leu	Ala	Cys	Cys	Asn	Cys	Ser	Tyr	Pro	Lys	Asp	Ser	Asp
			20					25					30		
Lys	His	Met	Leu	Ala	Lys	Gln	Ala	Gly	Leu	Thr	Arg	Ser	Gln	Val	Ser
		35					40					45			
Asn	Trp	Phe	Ile	Asn	Ala	Arg	Val	Arg	Leu	Trp	Lys	Pro	Met	Val	Glu
	50					55					60				
Glu	Met	Tyr	Leu	Glu	Glu	Thr	Lys	Ser	Arg	Glu	Gln	Ala	Gly	Ser	Glu
65					70					75					80
Asn	Gly	Thr	Thr	Arg	Arg	Ala	Ala	Thr	Lys	Ser	Asn	Lys	Asp	Ala	Ala
				85					90					95	
Gly	Leu	Lys	Ser	Ala	Ser	Gln	Glu	Asp	Asn	Ala	Phe	Gly	Met	Asn	Ser
			100					105					110		
Ser	Ile	Lys	Ser	Phe	Gln	Ser	Ser	Pro	Asn	Lys	Ala	Leu	Asn	Gln	Ala
		115					120					125			
Ala	Ile	Ser	Pro	Ser	Glu	Asn	Ser	Asn	Ser	Thr	Ser	Ser	Thr		
	130					135					140				

<210> 649
 <211> 131
 <212> PRT
 <213> Eucalyptus grandis

Gly	Ala	Pro	Ala	Ser	Gly	Gln	Ser	Ser	His	Ala	Leu	Gln	Val	Glu	Glu
1				5					10					15	
Thr	Arg	Asp	Ser	Pro	Leu	Gly	Phe	Val	Val	Lys	Val	Glu	Asp	Arg	Leu
			20					25					30		
Ser	Ser	Gly	Ser	Gly	Gly	Ser	Ala	Val	Val	Asp	Glu	Asp	Gly	Pro	Gln
		35					40					45			
Leu	Val	Asp	Ser	Gly	His	Ser	Tyr	Phe	His	Cys	Asn	Asp	Tyr	Pro	Gly
	50					55					60				
Ser	Leu	Val	Ala	Val	Asn	Gly	Leu	Gln	Ser	Glu	Asp	Asp	Gly	Ser	Asp
65					70					75					80
Asp	Ser	Arg	Gly	Tyr	Cys	Ser	Glu	Ile	Phe	Ala	Ala	Ala	Glu	Glu	Pro
				85					90					95	
His	Gln	Glu	Gly	Gly	Val	Pro	Asn	Gly	Val	Val	Gly	Val	Ala	Leu	Val
			100					105					110		
Leu	Gly	Phe	Arg	Leu	Leu	Val	Cys	Ser	Arg	Lys	Trp	Phe	Lys	Ser	Asn

115 120 125
Met Cys Ser
130

<210> 650
<211> 152
<212> PRT
<213> Eucalyptus grandis

<400> 650
Ser Arg Leu Gln Ala Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu
1 5 10 15
Leu Met Glu Glu Asn Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val
20 25 30
Tyr Glu Asn Ser Tyr Phe Arg Gln Gln Thr Gln Asn Ala Thr Leu Ala
35 40 45
Thr Thr Asp Thr Ser Cys Glu Ser Val Val Thr Ser Gly Gln His His
50 55 60
Leu Thr Pro Gln His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu
65 70 75 80
Ser Ile Ala Glu Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Thr Gly
85 90 95
Thr Ala Val Glu Trp Val Gln Leu Pro Gly Met Lys Pro Gly Pro Asp
100 105 110
Ser Ile Gly Ile Ile Ala Ile Ser His Gly Cys Thr Gly Val Ala Ala
115 120 125
Arg Ala Cys Gly Leu Val Gly Leu Glu Pro Ser Arg Val Ala Glu Ile
130 135 140
Leu Lys Asp Arg Pro Ser Trp Tyr
145 150

<210> 651
<211> 151
<212> PRT
<213> Eucalyptus grandis

<400> 651
Asp Asp Val Cys Gly Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys
1 5 10 15
Thr Tyr Asp Gly Glu Glu Asn Gly Asp Asp Asp Tyr Asp Glu Tyr Leu
20 25 30
His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr
35 40 45
Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys
50 55 60
Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile
65 70 75 80
Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys
85 90 95
Asp Phe Asp Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr
100 105 110
Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Glu Val Ile His
115 120 125
Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser
130 135 140
Thr Tyr Leu Asn Asn Cys Thr
145 150

<210> 652
 <211> 85
 <212> PRT
 <213> Eucalyptus grandis

<400> 652
 Thr Ala Lys Leu Lys Ser Ser Ile Phe Leu Leu Pro Leu His Gln Arg
 1 5 10 15
 Leu Ile Leu Lys Lys Ile Glu Arg Gln Gln Val Phe Arg Asp Gly Phe
 20 25 30
 Leu Val Leu Leu Glu Gly Gly Leu Ala Met Gly Ile Glu Glu Ala Thr
 35 40 45
 Lys Arg Gln Ser Ile Phe Ser Tyr Pro Glu Asp Leu Tyr Asn Glu Glu
 50 55 60
 Tyr Tyr Asp Asp Gln Ala Pro Glu Lys Lys Arg Arg Leu Thr Pro Glu
 65 70 75 80
 Gln Val His Leu Leu
 85

<210> 653
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 653
 Met Glu Trp Glu Lys Gln Glu Gln His His Pro His His His His His
 1 5 10 15
 Pro His His His Pro Gln Gln Gln Gln His His Gln Gln Gln Gln
 20 25 30
 Gln Pro Gln Gln Gln Gln Ala Lys Glu Ala Gln Gln Gln Gln Gln
 35 40 45
 Gln Gln Gly Gly Glu Gly Met Gly Asn Gly Thr Ala Ala Gly Asn Gly
 50 55 60
 Gly Gly Val Leu Tyr Val Lys Val Met Thr Asp Glu Gln Leu Glu Thr
 65 70 75 80
 Leu Arg Lys Gln Ile Ala Val Tyr Ala Ser Ile Cys Glu Gln Leu Val
 85 90 95
 Glu Met His

<210> 654
 <211> 150
 <212> PRT
 <213> Eucalyptus grandis

<400> 654
 Ala Arg Gly Pro Val Leu Leu Ala Glu Tyr Thr Glu Phe Ser Gly Asn
 1 5 10 15
 Phe Thr Ser Val Ala Ser Gln Cys Leu Gln Lys Leu Pro Ala Thr Ser
 20 25 30
 Asn Lys Phe Thr Tyr Asn Cys Asp Gly His Thr Phe Asn Tyr Leu Val
 35 40 45
 Asp Asp Gly Leu Thr Tyr Cys Val Val Ala Val Glu Ser Val Gly Arg
 50 55 60
 Gln Ile Pro Met Ala Phe Leu Glu Arg Ile Lys Glu Asp Phe Thr His
 65 70 75 80

Arg Tyr Asp Ala Gly Lys Ala Ala Thr Ala Ser Ala Asn Ser Leu Asn
85 90 95
Arg Glu Phe Gly Pro Lys Leu Lys Glu His Met Gln Tyr Cys Val Asp
100 105 110
His Pro Glu Glu Ile Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser
115 120 125
Glu Val Lys Gly Val Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg
130 135 140
Gly Glu Lys Ile Glu Leu
145 150

<210> 655
<211> 96
<212> PRT
<213> Eucalyptus grandis

<400> 655
Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val
1 5 10 15
Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile
20 25 30
Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala
35 40 45
Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys
50 55 60
Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser
65 70 75 80
Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu
85 90 95

<210> 656
<211> 338
<212> PRT
<213> Eucalyptus grandis

<400> 656
Met Ala Thr Tyr Tyr His Gln Ser Ser Ser Asp Pro Asp Gly Ala Leu
1 5 10 15
Gln Thr Leu Val Leu Met Asn Pro Ala Ser Tyr Val His Tyr Ser Asp
20 25 30
Ala Pro Pro Pro His Gln Gln Pro Ser Ala Ile Phe Leu Asn Ser Ser
35 40 45
Thr Ala Gly Pro Pro Ala Ser Gln Thr Gln Gln Phe Val Gly Ile Pro
50 55 60
Leu Pro Gly Ser Ala Ala Asp Ser Gln Pro Ser Ser Met His Val Asn
65 70 75 80
His Asp Leu Ser Ser Met His Gly Phe Met Pro Arg Val Gln Tyr Asn
85 90 95
Leu Trp Ser Ser Leu Asp Pro Ser Thr Ala Ala Arg Glu Ala Ser Arg
100 105 110
Thr His Gln Gln Gln Gly Leu Ser Leu Ser Leu Ser Pro Gln Gln Pro
115 120 125
Pro Pro Thr Pro Ala Gly Tyr Arg Ser Phe Val Arg Ala Glu Arg Ser
130 135 140
Gly Asp Gly Ala Ala Gly Ser Gln His Pro Pro Ala Ile Ser Gly Gly
145 150 155 160
Glu Asp Val Arg Ile Ser Gly Gly Ser Pro Ser Ser Ala Ser Gly Val

				165					170					175			
Thr	Asn	Gly	Ala	Ala	Val	Gly	Ser	Gly	Met	Gln	Gly	Val	Leu	Leu	Ser		
			180					185					190				
Ser	Lys	Tyr	Leu	Lys	Ala	Ala	Gln	Glu	Leu	Leu	Glu	Glu	Val	Val	Asn		
		195					200					205					
Val	Gly	Asn	Thr	Gly	Ile	Lys	Ala	Glu	Met	Leu	Lys	Lys	Ala	Ser	Gly		
	210					215					220						
Gln	Ser	Lys	Pro	Gly	Gly	Glu	Ser	Ala	Ala	Leu	Lys	Glu	Glu	Gly	Gly		
225				230						235					240		
Gly	Asp	Gly	Ser	Gly	Lys	Arg	Gly	Ala	Glu	Leu	Ser	Met	Ala	Glu	Arg		
			245					250					255				
Gln	Glu	Ile	Gln	Met	Lys	Lys	Ala	Lys	Leu	Ile	Asn	Met	Leu	Asp	Glu		
			260					265					270				
Val	Glu	Gln	Arg	Tyr	Arg	Gln	Tyr	His	Asn	Gln	Met	Gln	Ile	Val	Ile		
	275					280						285					
Ser	Ser	Phe	Glu	Gln	Ala	Ala	Gly	Ile	Gly	Ser	Ala	Arg	Thr	Tyr	Thr		
	290				295					300							
Ala	Leu	Ala	Leu	Gln	Thr	Ile	Ser	Lys	Gln	Phe	Arg	Cys	Leu	Lys	Asp		
305				310					315						320		
Ala	Ile	Ala	Gly	Gln	Ile	Arg	Ala	Ala	Asn	Lys	Ser	Leu	Gly	Glu	Glu		
			325					330					335				

Asp Gly

<210> 657
 <211> 123
 <212> PRT
 <213> Eucalyptus grandis

				<400> 657													
Val	Glu	Gln	Val	Gln	Phe	Leu	Glu	Lys	Ser	Phe	Glu	Val	Glu	Asn	Lys		
1				5				10					15				
Leu	Glu	Pro	Asp	Arg	Lys	Ile	Gln	Leu	Ala	Lys	Asp	Leu	Gly	Leu	Gln		
			20				25					30					
Pro	Arg	Gln	Val	Ala	Ile	Trp	Phe	Gln	Asn	Arg	Arg	Ala	Arg	Trp	Lys		
	35			40			45										
Thr	Lys	Gln	Leu	Glu	Lys	Asp	Tyr	Glu	Thr	Leu	Gln	Ala	Ser	Phe	Asn		
	50			55			60										
Thr	Leu	Lys	Ser	Asp	Tyr	Asp	Thr	Leu	Ile	Lys	Glu	Arg	Asn	Asp	Leu		
65				70			75							80			
Lys	Ala	Glu	Val	Leu	Asn	Leu	Thr	Asp	Lys	Leu	Leu	His	Lys	Gly	Asn		
			85				90						95				
Glu	Lys	Glu	Ser	Ser	Glu	Ser	Ser	Lys	Ser	Ser	Gln	Gly	Leu	Phe			
		100		105							110						
Gln	Asn	Pro	Ile	Ala	Asp	Ser	Val	Ser	Glu	Asp							
	115			120													

<210> 658
 <211> 128
 <212> PRT
 <213> Eucalyptus grandis

				<400> 658													
Ala	Ile	Ile	Ser	Ser	Asp	Gln	Met	Glu	Arg	Arg	Met	Leu	Glu	Ala	Ala		
1			5				10					15					
Arg	Lys	Gly	Asn	Val	His	Glu	Leu	Glu	Asp	Leu	Ile	Ser	Ser	Asn	Glu		
			20				25					30					

<211> 226
 <212> PRT
 <213> Eucalyptus grandis

<400> 666

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Ser Ala Ala Ser Leu Lys Ala Ser Pro Phe Gly Tyr Pro Gly Met Arg
 1          5          10          15
Pro Thr Arg Phe Thr Gly Ser Gln Ile Ile Met Pro Leu Gly His Thr
      20          25          30
Ile Glu His Glu Glu Met Leu Glu Val Ile Arg Leu Glu Gly His Ser
      35          40          45
Leu Ala Gln Glu Asp Ala Phe Val Ser Arg Asp Ile His Leu Leu Gln
 50          55          60
Ile Cys Ser Gly Ile Asp Glu Asn Ala Val Gly Val Cys Ser Glu Leu
65          70          75          80
Ile Phe Ala Pro Ile Asp Glu Met Phe Pro Asp Asp Ala Pro Leu Leu
      85          90          95
Pro Ser Gly Phe Arg Ile Ile Pro Leu Asp Ser Lys Ser Ser Asp Val
      100          105          110
Gln Asp Ser Leu Thr Thr Asn Arg Thr Leu Asp Leu Thr Ser Ser Leu
      115          120          125
Glu Val Gly Pro Ala Ser Thr Asn Cys Val Gly Asp Val Ala Pro Ser
      130          135          140
His Gly Ala Arg Ser Val Leu Thr Ile Ala Phe Gln Phe Pro Phe Asp
145          150          155          160
Ala Asn Thr Gln Asp Asn Val Ala Val Met Ala Arg Gln Tyr Val Arg
      165          170          175
Ser Val Ile Ser Ser Val Gln Arg Val Ala Met Val Ile Ser Pro Ser
      180          185          190
Gly Leu Gly Pro Ser Ile Asn Pro Lys Leu Ser Gln Gly Ser Pro Glu
      195          200          205
Ala Leu Thr Leu Ala Asn Trp Ile Cys Gln Ser Tyr Arg His Val Leu
210          215          220
Ile Ile
225
  
```

<210> 667
 <211> 147
 <212> PRT
 <213> Eucalyptus grandis

<400> 667

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Val Leu Leu Arg Phe Leu Thr Thr Ala Thr Thr Ile Cys Asn Asn Asn
 1          5          10          15
Ala Gly Gly Ser Gly Ser Gly Ser Gly Cys Phe Phe Met Asp
      20          25          30
Asn Asp Val Lys Ala Lys Ile Met Ala His Pro His Tyr His Arg Leu
      35          40          45
Leu Ser Ala Tyr Val Asn Cys Gln Lys Val Gly Ala Pro Pro Gly Val
 50          55          60
Val Ala Lys Leu Glu Glu Ala Cys Ala Ser Ala Ala Ile Met Ala Gly
65          70          75          80
Asn Ser Gly Met Ser Asn Thr Gly Cys Ile Gly Glu Asp Pro Ala Leu
      85          90          95
Asp Gln Phe Met Glu Ala Tyr Cys Glu Met Leu Thr Lys Tyr Glu Gln
      100          105          110
Glu Leu Ser Lys Pro Phe Lys Glu Ala Met Leu Phe Leu Gln Arg Ile
  
```


Gln Glu Met Gln Ser Trp Ala Glu Ala Ala Gln Cys Ala Val Ala Val
 130 135 140
 Ala Gly Val Val Met Gln Ala Leu Val Ala Arg Asn Asp Gly Val Trp
 145 150 155 160
 Ser Lys Asp His Val Thr Ala Leu Arg Lys Ile Cys Pro Met Val Ser
 165 170 175
 Ser Glu Ile Ser Cys Glu Ala Ser Ala Ala Glu Val Glu Gly Tyr Gly
 180 185 190
 Ala Ser Lys Leu Thr Val Asp Ser Ala Val Lys Tyr Leu Gln Leu Ala
 195 200 205
 Asn Lys Leu Phe Ser Gln Ala Glu Leu Tyr His Phe Cys Ala Ser Ile
 210 215 220
 Leu Glu Leu Val Ile Pro Val Tyr Lys Ser Arg Arg Ala Tyr Gly Gln
 225 230 235 240
 Leu Ala Lys Cys His Thr Leu Leu Thr Asn Ile Tyr Glu Ser Ile Leu
 245 250 255
 Glu Gln Glu Ser Ser Pro Ile Pro Phe Thr Asp Ala Thr Tyr Tyr Arg
 260 265 270
 Val Gly Phe Tyr Gly Glu Lys Phe Gly Lys Leu Asp Arg Lys Glu Tyr
 275 280 285
 Val Tyr Arg Glu Pro Arg
 290

<210> 670
 <211> 144
 <212> PRT
 <213> Eucalyptus grandis

<400> 670
 His Thr Lys Thr His His His His Ser Ile Ala Ile Ser Asn Pro Thr
 1 5 10 15
 Lys Ser Met Ser Gln Asp Tyr His His Pro Ser Ile Phe Ala Phe Ser
 20 25 30
 Asn Asn Gly Phe Glu Arg Pro Asp Val Ala Ala Ala Ser Ala Ala Ser
 35 40 45
 Asp Gln Glu Gln Gln His His Val Ala Gln Gln Ile Cys Arg Asp Lys
 50 55 60
 Leu Arg Val Gln Gly Phe Asp Gln Pro Pro Pro Pro Gln Leu Val Gly
 65 70 75 80
 Met Glu Glu Glu Pro Gly Gly Leu Pro Ala Tyr Glu Thr Ala Gly Met
 85 90 95
 Leu Ser Glu Met Phe Asn Phe Pro Pro Gly Gly Ala Ala Ala Glu
 100 105 110
 Leu Leu Glu Gln Pro Met Ala Ser Gly Tyr Arg Ala Ala Arg Pro Ser
 115 120 125
 Leu Pro Thr Val Ser Gly Thr Ala Gln Lys Thr Gln Val Cys Ile Gly
 130 135 140

<210> 671
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

<400> 671
 Ile Val Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu
 1 5 10 15
 Arg Pro Leu Tyr Glu Ser Ser Thr Leu Leu Ala Gln Arg Thr Thr Met

Val	Glu	Ile	Ala	Lys	Glu	Leu	Leu	Lys	Val	Asn	Thr	Asp	Leu	Cys	Ser
				85					90					95	
Val	Glu	Gly	Arg	Glu	Arg	Arg	Ile	Pro	Leu	His	Asp	Ala	Val	Ile	His
			100					105					110		
Gly	Glu	Val	Asp	Val	Met	Glu	Ile	Leu	Leu	Ser	Thr	Ser	Pro	Glu	Ser
		115					120					125			
Val	Glu	Lys	Lys	Thr	Ala	Arg	Lys	Glu	Thr	Val	Leu	His			
	130					135					140				

<210> 677
 <211> 121
 <212> PRT
 <213> Eucalyptus grandis

<400> 677															
Pro	Ser	Asp	Ile	Phe	Leu	Leu	Gln	Leu	Cys	Asn	Gly	Val	Asp	Glu	Asn
1				5					10					15	
Ala	Val	Gly	Thr	Cys	Ala	Glu	Leu	Leu	Phe	Ala	Pro	Ile	Asp	Ala	Ser
			20					25					30		
Phe	Ser	Asp	Asp	Ala	Pro	Ile	Ile	Pro	Ser	Gly	Phe	Arg	Ile	Ile	Pro
		35				40						45			
Leu	Asp	Pro	Gly	Ser	Asp	Ala	Phe	Ser	Pro	Asn	Arg	Thr	Leu	Asp	Leu
	50					55					60				
Ala	Ser	Ala	Leu	Asp	Val	Gly	Pro	Thr	Gly	Asn	Lys	Ala	Val	Gly	Asp
65					70					75				80	
Asn	Ser	Gly	His	Ser	Gly	Asn	Thr	Lys	Ser	Val	Met	Thr	Ile	Ala	Phe
			85						90					95	
Gln	Phe	Ala	Phe	Glu	Leu	His	Leu	Gln	Glu	Asn	Val	Ala	Ser	Met	Ala
		100						105					110		
Arg	Gln	Tyr	Leu	Arg	Ser	Ile	Ile	Ala							
		115				120									

<210> 678
 <211> 34
 <212> PRT
 <213> Eucalyptus grandis

<400> 678															
Met	Gly	Ile	Asp	Asp	Leu	Cys	Asn	Thr	Gly	Leu	Val	Leu	Ser	Leu	Gly
1				5					10					15	
Leu	Glu	Thr	Pro	Phe	Lys	Ile	Glu	Ala	Gln	Arg	Gln	Ala	Lys	Gln	Arg
			20					25					30		
Leu	Asn														

<210> 679
 <211> 110
 <212> PRT
 <213> Eucalyptus grandis

<400> 679															
Ile	Asn	Ala	Pro	Glu	Ser	Asp	Pro	Ser	Leu	Thr	Pro	Ala	Ile	Asn	Arg
1				5					10					15	
His	Pro	Phe	Ser	Glu	Thr	Gln	Ala	Thr	Thr	Leu	Leu	Gln	Ala	Thr	Thr
			20					25					30		
Ala	Met	Ile	Ser	Ser	Ala	Val	Gln	Val	Ala	Gly	Pro	Ala	His	Ile	Asp
		35					40					45			

Glu	Ser	Glu	Gln	Tyr	Tyr	Val	Thr	Leu	Glu	Met	Phe	Ile	Ala	Asp	Val
		35					40					45			
Lys	Arg	Met	Phe	Ala	Asn	Ala	Arg	Thr	Tyr	Asn	Ser	Pro	Asp	Thr	Ile
	50					55					60				
Tyr	Phe	Lys	Ile	Ala	Thr	Arg	Leu	Glu	Ala	His	Phe	Gln	Ser	Lys	Val
65					70					75					80
Gln	Ser	Asn	Leu	Gln	Ser	Gly	Ala	Gly	Lys	Ile	Gln	Gln			
				85					90						

<210> 687

<211> 185

<212> PRT

<213> Eucalyptus grandis

<400> 687

Met 1	Gly	Arg	Gly	Lys 5	Ile	Glu	Ile	Lys	Arg 10	Ile	Glu	Asn	Thr	Thr 15	Asn
Arg	Gln	Val	Thr 20	Phe	Cys	Lys	Arg	Arg 25	Asn	Gly	Leu	Leu	Lys 30	Lys	Ala
Tyr	Glu	Leu	Ser 35	Val	Leu	Cys	Asp 40	Ala	Glu	Val	Ala	Leu	Ile 45	Val	Phe
Ser	Ser 50	Arg	Gly	Arg	Leu	Tyr 55	Glu	Tyr	Ser	Asn 60	Asn	Ser	Ile	Arg	Ser
Thr 65	Ile	Glu	Arg	Tyr 70	Lys	Lys	Ala	Asn	Ser	Asp 75	Ser	Ser	Asn	Thr 80	Ser
Thr	Val	Thr	Glu	Ile 85	Asn	Ala	Gln	Tyr 90	Tyr	Gln	Gln	Glu	Ser 95	Ala	Lys
Leu	Arg	Gln	Gln 100	Ile	Gln	Met	Leu	Gln 105	Asn	Ser	Asn	Arg	His 110	Leu	Met
Gly	Asp 115	Ser	Leu	Ser	Ser	Leu	Ser 120	Val	Lys	Glu	Leu	Lys 125	Gln	Leu	Glu
Asn	Arg 130	Leu	Glu	Arg	Gly 135	Ile	Thr	Arg	Ile	Arg 140	Ser	Lys	Lys	His	Glu
Met 145	Leu	Leu	Thr	Glu 150	Ile	Glu	Tyr	Leu	Gln	Lys 155	Lys	Glu	Ile	Glu	Leu
Glu	Asn	Glu	Ser 165	Val	Phe	Leu	Arg	Thr 170	Lys	Ile	Ala	Glu	Val 175	Asp	Arg
Ile	Gln	Gln	Gly 180	Asn	Met	Val	Ala 185	Ala							

<210> 688

<211> 130

<212> PRT

<213> Eucalyptus grandis

<400> 688

Met	Gly	Arg	Gly	Lys	Ile	Glu	Ile	Lys	Arg	Ile	Glu	Asn	Ala	Asn	Ser
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Ser	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Gln	Glu	Leu	Ser	Ile	Leu	Cys	Asp	Ala	Glu	Val	Ala	Val	Ile	Ile	Phe
		35					40					45			
Ser	Asn	Thr	Gly	Lys	Leu	Tyr	Glu	Phe	Ser	Ser	Ser	Gly	Met	Lys	Gln
	50					55					60				
Ile	Leu	Ser	Arg	Tyr	Asn	Arg	Cys	Gln	Asp	Ser	Pro	Glu	Ser	Thr	Val
65					70					75					80
Val	Glu	Tyr	Lys	Pro	Glu	Ser	Thr	Lys	Glu	Asp	Asp	Lys	Val	Val	Asp

<211> 68
 <212> PRT
 <213> Eucalyptus grandis

<400> 691
 Arg Ile Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Lys
 1 5 10 15
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala
 20 25 30
 Glu Val Ala Leu Ile Ile Phe Ser Ser Arg Gly Lys Leu His Glu Phe
 35 40 45
 Cys Ser Gly Pro Arg Tyr Arg Val Phe Val Cys Tyr His Leu Phe Phe
 50 55 60
 Ser Leu Met Leu
 65

<210> 692
 <211> 140
 <212> PRT
 <213> Eucalyptus grandis

<400> 692
 Ile Asn Ala Gly Arg Phe Asp Gln Arg Thr Thr His Glu Glu Arg Arg
 1 5 10 15
 Leu Thr Leu Glu Thr Leu Leu His Asp Glu Glu Arg Tyr Gln Glu Thr
 20 25 30
 Val His Asp Val Pro Ser Leu Gln Glu Val Asn Arg Met Ile Ala Arg
 35 40 45
 Ser Glu Glu Glu Val Glu Leu Phe Asp Gln Met Asp Glu Glu Leu Asp
 50 55 60
 Trp Thr Glu Glu Met Thr Asn Tyr Glu Leu Val Pro Lys Trp Leu Arg
 65 70 75 80
 Ala Ser Thr Lys Glu Val Asn Ala Ala Ile Ala Thr Leu Ser Lys Lys
 85 90 95
 Pro Ser Lys Asn Thr Leu Phe Ala Ser Thr Ile Val Glu Pro Asn Glu
 100 105 110
 Pro Val Ser Glu Ser Val Arg Lys Arg Gly Arg Pro Lys Ser Lys Lys
 115 120 125
 His Pro Asn Tyr Lys Glu Leu Asp Asp Asp Asn Glu
 130 135 140

<210> 693
 <211> 126
 <212> PRT
 <213> Eucalyptus grandis

<400> 693
 Ala Ala Gln Leu Lys His Ser Cys Glu Leu Leu Gly Glu Lys Asp Gly
 1 5 10 15
 Ala Gly Ser Ser Gly Ile Thr Lys Gly Glu Thr Pro Arg Leu Lys Leu
 20 25 30
 Leu Asp Gln Ser Leu Arg Gln Gln Arg Ala Phe His Gln Met Gly Met
 35 40 45
 Met Glu Gln Glu Ala Trp Arg Pro Gln Arg Gly Leu Pro Glu Arg Ser
 50 55 60
 Val Asn Ile Leu Arg Ala Trp Leu Phe Glu His Phe Leu His Pro Tyr
 65 70 75 80

Pro Ser Asp Ala Asp Lys His Leu Leu Ala Arg Gln Thr Gly Leu Ser
 85 90 95
 Arg Asn Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp
 100 105 110
 Lys Pro Met Val Glu Glu Met Tyr Gln Gln Glu Ser Lys Glu
 115 120 125

<210> 694
 <211> 53
 <212> PRT
 <213> Eucalyptus grandis

<400> 694
 Phe Cys Ser Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr
 1 5 10 15
 Gly Ala Leu Glu Pro Asn Val Ser Ala Arg Glu Ser Leu Glu Leu Ser
 20 25 30
 Cys Gln Gln Glu Tyr Leu Arg Leu Lys Ala Arg Tyr Glu Ala Leu Gln
 35 40 45
 Arg Thr Gln Arg Tyr
 50

<210> 695
 <211> 86
 <212> PRT
 <213> Eucalyptus grandis

<400> 695
 Lys Ile Glu Asp Val Arg Glu Glu Ile Leu Arg Lys Arg Arg Ala Gly
 1 5 10 15
 Lys Leu Pro Gly Asp Thr Thr Ser Val Leu Lys Asn Trp Trp Gln Gln
 20 25 30
 His Ser Lys Trp Pro Tyr Pro Thr Glu Asp Asp Lys Ala Lys Leu Val
 35 40 45
 Glu Glu Thr Gly Leu Gln Leu Lys Gln Ile Asn Asn Trp Phe Ile Asn
 50 55 60
 Gln Arg Lys Arg Asn Trp His Asn Asn Ser Gln Ser Val Thr Ser Leu
 65 70 75 80
 Lys Ser Lys Arg Lys Arg
 85

<210> 696
 <211> 99
 <212> PRT
 <213> Eucalyptus grandis

<400> 696
 Pro Val Asp Ile Thr Gly Met Gln Ala Val Met Thr Gly Cys Asp Ser
 1 5 10 15
 Ser Asn Ile Ala Ala Leu Pro Ser Gly Phe Ser Ile Leu Pro Asp Gly
 20 25 30
 Ile Glu Ser Arg Pro Leu Val Ile Ser Ser Arg His Glu Glu Lys Ser
 35 40 45
 Ser Glu Gly Gly Ser Leu Leu Thr Ile Ala Phe Gln Ile Leu Thr Asn
 50 55 60
 Thr Ser Pro Thr Ala Lys Leu Thr Val Glu Ser Val Glu Ser Val Asn
 65 70 75 80

Thr Leu Ile Ser Cys Thr Leu Arg Asn Ile Arg Thr Ser Leu Gln Cys
85 90 95
Glu Asp Gly

<210> 697
<211> 134
<212> PRT
<213> Eucalyptus grandis

<400> 697
Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly
1 5 10 15
Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val
20 25 30
Ala Leu Ile Ile Phe Ser His Arg Gly Lys Leu Tyr Glu Phe Cys Ser
35 40 45
Ser Ser Ser Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr
50 55 60
Gly Ala Pro Glu Pro Ser Ile Ser Thr Arg Glu Ala Gln Leu Glu Leu
65 70 75 80
Ser Ser Gln Gln Glu Tyr Leu Lys Leu Lys Ala Arg Tyr Glu Ala Leu
85 90 95
Gln Arg Thr Gln Arg Asn Leu Leu Gly Glu Glu Leu Gly Pro Leu Ser
100 105 110
Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Ser Ser Leu Lys
115 120 125
Gln Ile Arg Ser Thr Arg
130

<210> 698
<211> 145
<212> PRT
<213> Eucalyptus grandis

<400> 698
Met Gln Glu Pro Asn Leu Ala Met Met Gly Gly Gly Gly Gly Gly Gly
1 5 10 15
Gly Gly Gly Gly Gly Ile Val Gly Gly Gly Gly Gly Gly Leu Gly Ser
20 25 30
Glu Ala Ser Phe Ser Gly Asp His Pro Gln Arg Gln Leu Lys Gly Glu
35 40 45
Ile Ala Ser His Pro Met Tyr Glu Gln Leu Leu Ser Ala His Val Ala
50 55 60
Cys Leu Arg Val Ala Thr Pro Ile Asp Gln Leu Pro Leu Ile Asp Ala
65 70 75 80
Gln Leu Ala Gln Ser His His Leu Leu Arg Ser Tyr Ala Ser Ser Val
85 90 95
Gln His Gly His Ser Ser Leu Ser Pro His Asp Arg Gln Glu Leu Asp
100 105 110
His Phe Leu Ala Gln Tyr Leu Val Val Leu Cys Ser Phe Lys Glu Gln
115 120 125
Leu Gln Gln His Val Arg Val His Ala Val Glu Ala Val Met Ala Cys
130 135 140
Arg
145

50		55		60											
Gly	Gly	Ser	Arg	Gln	Pro	Ala	Val	Leu	Arg	Thr	Phe	Ser	Gln	Lys	Leu
65					70					75					80
Cys	Arg	Gly	Phe	Asn	Asp	Ala	Val	Asn	Gly	Phe	Val	Asp	Asp	Gly	Trp
				85					90					95	
Ser	Val	Leu	Ser	Ser	Asp	Gly	Val	Glu	Asp	Val	Thr	Ile	Ala	Val	Asn
			100					105					110		
Ser	Ser	Pro	Asn	Lys	Phe	Leu	Gly	Ser	Gln	Tyr	Asn	Ala	Thr	Ile	Phe
		115					120					125			
Pro	Asn	Phe	Gly	Arg	Gly	Val	Leu	Cys	Ala	Lys	Ala	Ser	Met	Leu	Leu
	130				135						140				
Gln	Asn	Val	Pro	Pro	Ala	Val	Leu	Val	Arg	Phe	Leu	Arg	Glu	His	Arg
145					150					155					160
Ser	Glu	Trp	Ala	Asp	His	Gly	Ile	Asp	Ala	Tyr	Ser	Ala	Ala	Ser	Leu
				165					170					175	
Lys	Thr	Ser	Ser	Tyr	Ala	Ile	Pro	Cys	Val	Arg	Pro	Gly	Gly	Phe	Pro
			180					185					190		
Ser	Ser	His	Val	Ile	Leu	Pro	Leu	Ala	His	Thr	Val	Glu			
		195					200					205			

<210> 702
 <211> 126
 <212> PRT
 <213> Eucalyptus grandis

<400> 702
Leu Phe Glu His Phe Leu His Pro Tyr Pro Lys Asp Ser Asp Lys Val
1 5 10 15
Met Leu Ala Lys Gln Thr Gly Leu Thr Arg Ser Gln Val Ser Asn Trp
20 25 30
Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu Glu Met
35 40 45
Tyr Thr Glu Glu Ile Lys Glu Gln Glu Gln Asn Gly Gly Gly Ala Glu
50 55 60
Glu Lys Pro Ser Lys Ser Glu Arg Glu Asp Ser Ala Ser Lys Ser Ser
65 70 75 80
Gly Leu Gln Asp Lys Ala Pro Asn Ser Asn Glu Asn Ser Thr Lys Ser
85 90 95
Phe Lys Pro Lys Glu Ile Thr Ser Arg Asn His Asp Thr Pro Ala Ile
100 105 110
Ser Thr Asn Ser Ala Ser Ser Ile Gly Gly Asn Val Arg Ser
115 120 125

<210> 703
 <211> 116
 <212> PRT
 <213> Eucalyptus grandis

<400> 703
Asp Lys Leu Met Lys His Glu Tyr Gly Trp Val Phe Asn Thr Pro Val
1 5 10 15
Asp Val Lys Gly Leu Gly Leu His Asp Tyr Tyr Ser Ile Ile Lys His
20 25 30
Pro Met Asp Leu Gly Ser Val Lys Thr Arg Leu Asn Arg Asn Trp Tyr
35 40 45
Lys Ser Pro Lys Glu Phe Ala Glu Asp Val Arg Leu Thr Phe Arg Asn
50 55 60

	35					40				45							
Asp	Ala	Val	Gly	Leu	Gly	Leu	His	Asp	Tyr	His	Gln	Ile	Ile	Lys	Asn		
	50					55					60						
Pro	Met	Asp	Leu	Gly	Thr	Val	Lys	Thr	Asn	Leu	Glu	Arg	Asn	Phe	Tyr		
65					70					75					80		
His	Ser	Pro	Gln	Glu	Phe	Ala	Ala	Asp	Val	Arg	Leu	Thr	Phe	Asn	Asn		
			85					90						95			
Ala	Leu	Thr	Tyr	Asn	Pro	Lys	Gly	His	Asp	Val	His	His	Met	Ala	Glu		
			100					105					110				
Thr	Leu	Leu	Val	Gln	Phe	Asp	Gln	Met	Phe	Asp	Pro						
	115						120										

<210> 709

<211> 126

<212> PRT

<213> Eucalyptus grandis

<400> 709

Val	Ser	Leu	Ser	Arg	Val	Glu	Lys	His	Ala	Ser	Ser	Ala	Met	Asn	Lys		
1				5				10						15			
Leu	His	Glu	Ala	Ala	Met	Lys	Gly	Asp	Leu	Ala	Ala	Leu	Gln	Asp	Leu		
			20					25					30				
Leu	Leu	Gln	Asp	Pro	Gln	Ile	Leu	His	Lys	Thr	Thr	Ser	Ser	Ser	Ser		
		35				40						45					
Asp	Gly	Thr	Pro	Leu	His	Val	Ser	Cys	Leu	Ser	Gly	His	Ala	Ser	Phe		
	50				55			60									
Thr	Lys	His	Leu	Leu	Thr	His	Asn	Pro	Glu	Leu	Ala	Lys	Glu	Ala	Asp		
65				70				75							80		
Ser	Arg	Gly	Ser	Leu	Pro	Leu	His	Val	Ala	Cys	Ala	Lys	Gly	Asp	Val		
			85					90						95			
Glu	Ile	Val	Arg	Ala	Leu	Val	Ala	Val	Asp	Pro	Ala	Gly	Cys	Leu	Arg		
			100					105					110				
Tyr	Asp	Arg	Glu	Gly	Arg	Thr	Pro	Leu	His	Leu	Ala	Ala	Ile				
	115						120					125					

<210> 710

<211> 137

<212> PRT

<213> Eucalyptus grandis

<400> 710

Asp	Asp	Leu	Asp	Asn	Glu	Arg	Ala	Ser	Ser	Arg	Gly	Gly	Gly	Ser	Asp		
1				5				10						15			
Glu	Glu	Asp	Gly	Asp	Met	Ser	Arg	Lys	Lys	Leu	Arg	Leu	Ser	Lys	Asp		
		20						25					30				
Gln	Ser	Ala	Val	Leu	Glu	Glu	Ser	Phe	Lys	Glu	His	Asn	Thr	Leu	Asn		
		35				40						45					
Pro	Lys	Gln	Lys	Leu	Ala	Leu	Ala	Lys	Gln	Leu	Gly	Leu	Arg	Pro	Arg		
	50			55				60									
Gln	Val	Glu	Val	Trp	Phe	Gln	Asn	Arg	Arg	Ala	Arg	Thr	Lys	Leu	Lys		
65				70				75							80		
Gln	Thr	Glu	Val	Asp	Cys	Glu	Tyr	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu		
			85					90						95			
Thr	Glu	Glu	Asn	Arg	Arg	Leu	Gln	Lys	Glu	Val	Gln	Glu	Leu	Arg	Ala		
			100					105					110				
Leu	Lys	Leu	Ser	Pro	Gln	Phe	Tyr	Met	His	Leu	Phe	Pro	Ser	Thr	Thr		
	115						120					125					

Leu Thr Met Cys Pro Phe Cys Glu Arg
130 135

<210> 711
<211> 104
<212> PRT
<213> Eucalyptus grandis

<400> 711
Ala Asp Tyr Asp Glu Gly Gly Asp Asp Asn Pro Gly Ser Arg His Pro
1 5 10 15
Val Thr Arg Gln Phe Phe Pro Val Glu Glu Glu Glu Leu Glu Glu
20 25 30
Asp Gly Glu Arg Ala Gly Met Gly Gly Ala Ala Val Pro Pro Gly Phe
35 40 45
Pro Arg Ala His Trp Val Gly Val Arg Phe Arg Gln Ser Asp His His
50 55 60
Pro Ile Gly Ser Gly Lys Gly Ser Pro Ile Leu Glu Gly Ser Gln Pro
65 70 75 80
Met Lys Lys Ile Arg Lys Gly Pro Arg Ser Arg Ser Ser Gln Tyr Arg
85 90 95
Gly Val Thr Phe Tyr Arg Arg Thr
100

<210> 712
<211> 138
<212> PRT
<213> Eucalyptus grandis

<400> 712
Asp Asp Leu Asp Asn Glu Arg Ala Ser Ser Arg Gly Gly Gly Ser Asp
1 5 10 15
Glu Glu Asp Gly Asp Met Ser Arg Lys Lys Leu Arg Leu Ser Lys Asp
20 25 30
Gln Ser Ala Val Leu Glu Glu Ser Phe Lys Glu His Asn Thr Leu Asn
35 40 45
Pro Lys Gln Lys Leu Ala Leu Ala Lys Gln Leu Gly Leu Arg Pro Arg
50 55 60
Gln Val Glu Val Trp Phe Gln Asn Arg Arg Ala Arg Thr Lys Leu Lys
65 70 75 80
Gln Thr Glu Val Asp Cys Glu Tyr Leu Lys Arg Cys Cys Glu Ser Leu
85 90 95
Thr Glu Glu Asn Arg Arg Leu Gln Lys Glu Val Gln Glu Leu Arg Ala
100 105 110
Leu Lys Leu Ser Pro Gln Phe Tyr Met His Leu Ser Pro Pro Thr Thr
115 120 125
Leu Thr Met Cys Pro Ser Cys Glu Arg Val
130 135

<210> 713
<211> 128
<212> PRT
<213> Eucalyptus grandis

<400> 713
Glu Ser Gln Lys Leu Met Glu Ala Val Gln Asn Gly Asp Val Ser Ala
1 5 10 15

Ala	Val	Asp	Leu	Leu	Asp	Gln	Asp	Pro	Leu	Leu	Leu	Asp	Arg	Ile	Ile
		20					25					30			
Val	Leu	Gly	Val	Ser	Asp	Thr	Pro	Leu	His	Ala	Ala	Ser	Val	Leu	Gly
	35					40					45				
His	Ala	Asp	Leu	Val	Arg	Glu	Leu	Leu	Arg	Arg	Ala	Pro	Arg	Leu	Ala
	50				55					60					
Ser	Glu	Gln	Asp	Ser	Arg	Gly	Asn	Ser	Pro	Leu	His	Leu	Ala	Ala	Gly
65				70				75						80	
Lys	Gly	His	Gly	Glu	Ile	Val	Gly	Glu	Leu	Leu	Ser	Ala	Asp	Pro	Ala
			85					90					95		
Ala	Ala	Ser	Ala	Arg	Asn	Leu	Asp	Gly	Arg	Ala	Pro	Ile	His	Val	Ala
		100					105					110			
Ala	Ile	Lys	Gly	Arg	Val	Asp	Ala	Val	Gly	Arg	Met	Val	Gly	Ala	Val
	115					120					125				

<210> 714

<211> 93

<212> PRT

<213> Eucalyptus grandis

<400> 714

Tyr	Ser	Gly	Tyr	Leu	Ser	Ser	Leu	Lys	Gln	Glu	Leu	Ser	Lys	Lys	Lys
1				5				10					15		
Lys	Lys	Gly	Lys	Leu	Pro	Lys	Glu	Ala	Arg	Gln	Lys	Leu	Leu	Ser	Trp
		20					25					30			
Trp	Glu	Leu	His	Tyr	Lys	Trp	Pro	Tyr	Pro	Ser	Glu	Thr	Glu	Lys	Val
	35					40					45				
Ala	Leu	Ala	Glu	Ser	Thr	Gly	Leu	Asp	Gln	Lys	Gln	Ile	Asn	Asn	Trp
	50				55					60					
Phe	Ile	Asn	His	Val	Ile	Glu	Cys	Trp	Val	Lys	Ser	Met	Ala	Thr	Leu
65				70				75						80	
Met	Gln	Glu	Ile	Phe	Leu	Met	Thr	Lys	Val	Ile	Leu	Arg			
			85					90							

<210> 715

<211> 127

<212> PRT

<213> Eucalyptus grandis

<400> 715

Thr	Phe	Ser	Phe	Gly	Ile	Leu	Lys	Ala	Gly	Glu	Gly	Gly	Asp	Gly	Val
1			5					10					15		
Ala	Asp	Asp	Glu	Leu	Gly	Val	Thr	Arg	Gln	Leu	Phe	Pro	Val	Arg	Glu
		20					25					30			
Val	Asp	Ala	Asp	Met	Glu	Trp	Cys	Gly	Glu	Ser	Ser	Ser	Leu	Asp	Lys
	35					40					45				
Arg	Ser	Asp	Val	Phe	Leu	Val	Gly	Ala	Cys	Lys	Glu	Lys	Glu	Gly	Pro
	50				55					60					
Arg	Leu	Ala	Met	Pro	Gln	Gln	Arg	Arg	Lys	Ser	Arg	Arg	Gly	Pro	Arg
65				70				75						80	
Ser	Arg	Ser	Ser	Gln	Tyr	Arg	Gly	Val	Thr	Phe	Tyr	Arg	Arg	Thr	Gly
			85				90						95		
Arg	Trp	Glu	Ser	His	Ile	Trp	Asp	Cys	Gly	Lys	Gln	Val	Tyr	Leu	Gly
		100					105					110			
Gly	Phe	Asp	Thr	Ala	His	Ala	Ala	Ala	Arg	Pro	Met	Ile	Glu	Leu	
	115					120						125			

<210> 716
 <211> 35
 <212> PRT
 <213> Eucalyptus grandis

<400> 716
 Ser Glu Asp Met Gln Phe Met Val Met Asp Gly Leu His Pro Gln Gly
 1 5 10 15
 Ala Ala Leu Tyr Met Asp Gly His Tyr Ile Gly Asp Gly Pro Tyr Arg
 20 25 30
 Leu Gly Pro
 35

<210> 717
 <211> 179
 <212> PRT
 <213> Eucalyptus grandis

<400> 717
 Ala Ala Phe Glu Gly Met Asp Ser Leu Pro Ser Pro Arg Lys Lys Lys
 1 5 10 15
 Asn Gln Leu Val Asn Arg Arg Arg Phe Ser Asp Glu Gln Ile Arg Ser
 20 25 30
 Leu Glu Ser Ile Phe Glu Ser Glu Ser Arg Leu Glu Pro Arg Lys Lys
 35 40 45
 Leu Gln Leu Ala Arg Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile
 50 55 60
 Trp Phe Gln Asn Lys Arg Ala Arg Trp Lys Ser Lys Gln Leu Glu Arg
 65 70 75 80
 Asp Phe Ala Ile Leu Arg Ala Asn Tyr Asn Ala Leu Tyr Ser Arg Phe
 85 90 95
 Glu Ser Leu Lys Lys Glu Lys Gln Ser Leu Val Thr Gln Ile Glu Lys
 100 105 110
 Leu Asn Gln Leu Val Glu Lys Pro Gln Gly Glu Gly Gln Ser Cys Gly
 115 120 125
 His Asp Leu Ala Thr Asn Ser Thr Asp Arg Glu Ser Asp Asn Gly Val
 130 135 140
 Pro Lys Tyr Glu Asp Ser Gln Pro Val Phe Pro Asp Lys Leu Thr Arg
 145 150 155 160
 Leu Met Gly Ile Pro Cys Glu Asp Asp Tyr Phe Gly Leu Lys Arg Ala
 165 170 175
 Glu Pro Pro

<210> 718
 <211> 142
 <212> PRT
 <213> Eucalyptus grandis

<400> 718
 Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn Glu Lys Glu Ser Ser
 1 5 10 15
 Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe Gln Asn Pro Ile Ala
 20 25 30
 Asp Ser Val Ser Glu Asp Glu Val Ser Arg Val Pro Ile Pro Thr Trp
 35 40 45
 Pro Glu Asp Ile Cys Ser Val Lys Ser Asp Met Phe Asp Ser Glu Ser

35						40						45					
Val	Gly	Val	Thr	Trp	Met	Lys	Val	Pro	Arg	Thr	Asn	Gln	Leu	Gly	Val		
	50					55					60						
Arg	Thr	Lys	Asp	Gly	Leu	His	Tyr	Lys	Phe	Thr	Gly	Phe	Arg	Asp	Pro		
65					70					75					80		
Asp	Val	Ile	Ser	Leu	Thr	Asn	Phe	Phe	Gln	Asn	Thr	Cys	Gly	Leu	Thr		
				85					90					95			
Pro	Glu	Glu	Lys	Gln	Leu	Ser	Val	Ser	Gly	Arg	Asn	Trp	Gly	Glu	Val		
			100					105					110				
Asp	Leu	Ser	Gly	Asn	Met	Leu	Thr										
		115				120											

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<210> 726
<211> 58
<212> PRT
<213> Eucalyptus grandis
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<400> 726															
Arg	Leu	Gly	Pro	Met	Gly	Pro	Lys	Thr	Leu	Cys	Asn	Ala	Cys	Gly	Ile
1				5					10					15	
Arg	Tyr	Lys	Thr	Gly	Arg	Leu	Phe	Pro	Glu	Tyr	Arg	Pro	Ser	Ala	Ser
			20					25					30		
Pro	Thr	Tyr	Val	Pro	Ser	Leu	Asn	Ile	Val	Ser	Asn	Glu	Ile	Pro	Ser
		35					40					45			
Ser	His	Leu	Trp	Leu	Ser	Leu	Leu	Gln	Lys						
	50					55									

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<210> 727
<211> 78
<212> PRT
<213> Eucalyptus grandis
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<div> <div><400></div> <div>727</div> </div>															
Gly	Val	Ala	Ile	Asp	Val	Lys	Ile	Met	Gly	Trp	Asp	Glu	Val	Val	Arg
1				5					10					15	
Val	Glu	Ser	Gly	Arg	Lys	Asp	His	Pro	Ala	Ala	Arg	Leu	Met	Val	Ala
			20					25					30		
Leu	Gln	Glu	Leu	Asn	Leu	Glu	Leu	Gln	His	Ala	Ser	Val	Ser	Val	Val
			35				40					45			
Asn	Glu	Leu	Met	Ile	Gln	Gln	Ala	Thr	Val	Lys	Met	Gly	Ser	Gln	Leu
	50					55					60				
Tyr	Thr	Gln	Glu	Gln	Leu	Lys	Ala	Ala	Leu	Leu	Ala	Val	Ile		
65					70					75					

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<210> 728
<211> 123
<212> PRT
<213> Eucalyptus grandis
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<div> <div><400></div> <div>728</div> </div>															
Lys	Pro	Pro	Met	Lys	Lys	Gln	Lys	Ser	Lys	Pro	Ala	Ala	Ala	Ser	Glu
1				5					10					15	
Thr	Ala	Gly	Pro	Ala	Arg	Arg	Cys	Ser	His	Cys	Gly	Val	Gln	Lys	Thr
			20					25					30		
Pro	Gln	Trp	Arg	Ala	Gly	Pro	Asn	Gly	Ala	Lys	Thr	Leu	Cys	Asn	Ala
		35					40					45			
Cys	Gly	Val	Arg	Phe	Lys	Ser	Gly	Arg	Leu	Tyr	Pro	Glu	Tyr	Arg	Pro

50		55		60
Ala Cys Ser Pro Thr Phe Ser Ser Glu Leu His Ser Asn His His Arg				
65		70		75
Lys Val Leu Glu Met Arg Arg Lys Lys Glu Ser Met Thr Thr Thr Ala				
	85		90	95
Leu Gly Gln Pro Glu Pro Gly Arg Ala Arg Ala Gln Leu Leu Arg Ala				
	100		105	110
Arg Val Gly Ser Ser Trp Arg Pro Arg Glu Ile				
115		120		

<210> 729
 <211> 213
 <212> PRT
 <213> Eucalyptus grandis

<400> 729
Ala Ala Gly Leu Leu Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
1 5 10 15
Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Asn Phe Thr Glu Glu Glu
20 25 30
Asp Glu Ile Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser
35 40 45
Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn
50 55 60
Tyr Trp Asn Thr His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp
65 70 75 80
Pro Ala Thr His Arg Leu Ile Asn Glu Pro Ala Gln Asp His His Asp
85 90 95
Glu Pro Thr Ile Ser Phe Ala Ala Asn Ser Lys Glu Ile Lys Glu Met
100 105 110
Lys Asn Asn Ala Glu Leu Asn Phe Met Cys Asn Leu Glu Glu Ser Ala
115 120 125
Asp Val Ala Ser Ser Ala Arg Glu Arg Cys Pro Asp Leu Asn Leu Glu
130 135 140
Leu Gly Ile Ser Pro Pro Ser His Gln Leu His Gln Pro Glu Pro Leu
145 150 155 160
Leu Arg Phe Thr Gly Arg Lys Ser Asp Leu Cys Leu Glu Cys Asn Leu
165 170 175
Gly Leu Lys Asn Ser Gln Asn Cys Arg Cys Ser Val Gly Val Ile Glu
180 185 190
Ser Glu Thr Ser Val Gly Tyr Asp Phe Leu Gly Leu Lys Ala Ser Val
195 200 205
Leu Asp Tyr Arg Ser
210

<210> 730
 <211> 61
 <212> PRT
 <213> Eucalyptus grandis

<400> 730
Met Ser Val Leu Ser Lys Ser Asp Ser Val Glu Ile Arg Glu Val Trp
1 5 10 15
Glu Tyr Asn Leu Glu Asp Glu Phe Ser Phe Ile Arg Glu Ile Val Asp
20 25 30
Asp Tyr Pro Tyr Ile Ala Met Asp Thr Glu Phe Pro Gly Met Val Leu
35 40 45

Arg Pro Val Gly Asn Phe Lys Ser Ser Ser Glu Ser His
 50 55 60

<210> 731
 <211> 94
 <212> PRT
 <213> Eucalyptus grandis

<400> 731
 Met Arg Arg Lys Lys Lys Ala Val His Lys Thr Thr Thr Thr Asp Asp
 1 5 10 15
 Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val Asn Ala Ile Pro
 20 25 30
 Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp Val Val Ile Gln Phe
 35 40 45
 Leu Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn Thr Trp Val Val
 50 55 60
 Ser Gly Ser Pro Gln Thr Lys Lys Leu Gln Asp Ile Leu Pro Gly Ile
 65 70 75 80
 Ile Asn Gln Leu Gly Pro Asp Asn Leu Asp Asn Leu Gly Ser
 85 90

<210> 732
 <211> 103
 <212> PRT
 <213> Eucalyptus grandis

<400> 732
 Tyr Trp Glu Thr Leu Met Phe Phe Gln Ser Glu Glu Leu Leu His Asn
 1 5 10 15
 Ser Cys Val Ser Glu Val Ile Ser Arg Phe Asn Gly Pro Ser Ser Pro
 20 25 30
 Asp Ala Ala Ala Leu Pro Val Ala Ser Lys Ser Ile Asp Leu Glu Arg
 35 40 45
 Asn Arg Arg Lys Lys Leu Asn Glu Arg Leu Phe Ala Leu Arg Ala Leu
 50 55 60
 Val Pro Lys Ile Ser Lys Met Asp Lys Ala Ser Ile Val Lys Asp Ala
 65 70 75 80
 Ile Asp Tyr Ile Gln Asp Leu Arg Glu Gln Glu Gly Arg Ser Glu Pro
 85 90 95
 Arg Ser Gln Ser Ser Asn Leu
 100

<210> 733
 <211> 78
 <212> PRT
 <213> Eucalyptus grandis

<400> 733
 Gly Val Ala Ile Asp Val Lys Ile Met Gly Trp Asp Ala Val Val Arg
 1 5 10 15
 Val Glu Ser Gly Arg Lys Asp His Pro Ala Ala Arg Leu Met Val Ala
 20 25 30
 Leu Gln Glu Leu Asn Leu Glu Leu Gln His Ala Ser Val Ser Val Val
 35 40 45
 Asn Glu Leu Met Ile Gln Gln Ala Thr Val Lys Met Gly Ser Gln Leu
 50 55 60

Tyr Thr Gln Glu Gln Leu Lys Ala Ala Leu Leu Ala Val Ile
65 70 75

<210> 734
<211> 122
<212> PRT
<213> Eucalyptus grandis

<400> 734
Gly Ile Tyr Ser Cys Leu Asn Leu Asp Ala Ser Asn Gly Gly Ser Ser
1 5 10 15
Ala Ile Asp Pro Ser Ile Ser Ser Ala Ile Leu Asp Asp Phe Cys Thr
20 25 30
Ile Lys Asp Gly Pro Phe Pro Asn Leu Ser Asp Cys Leu Val Gly Asn
35 40 45
Phe Ser Ser Ser Gln Asp Val Gln Ser Gln Ile Thr Ser Ala Ser Leu
50 55 60
Ala Asp Ser Gln Ala Phe Ser Arg Gln Asp Phe Pro Asp Asn Ser Gly
65 70 75 80
Gly Thr Ser Ser Ser Asn Val Asp Phe Asp Glu Ser Ser Ile Leu Lys
85 90 95
Asn Ser Thr Trp Gln Gln Gln Val Ala Pro Pro Met Arg Thr Tyr Thr
100 105 110
Lys Val Gln Lys Ala Gly Ser Val Gly Arg
115 120

<210> 735
<211> 133
<212> PRT
<213> Eucalyptus grandis

<400> 735
Met Gly Ser Ser Ala Ser Ser Gln Arg Pro Asp Asn Leu Gln Asp Lys
1 5 10 15
Val Gly Pro Val Ser Val Ser Asp Glu Glu Trp Lys Lys Arg Leu Thr
20 25 30
Pro Glu Gln Tyr Tyr Val Ala Arg Gln Lys Gly Thr Glu Arg Ala Phe
35 40 45
Thr Gly Glu Tyr Trp Asn Thr Lys Thr Pro Gly Thr Tyr His Cys Val
50 55 60
Cys Cys Asp Thr Pro Leu Phe Glu Ser Asn Thr Lys Phe Asp Ser Gly
65 70 75 80
Thr Gly Trp Pro Ser Tyr Tyr Gln Pro Ile Gly Asn Asn Val Lys Ser
85 90 95
Lys Leu Asp Leu Ser Ile Ile Phe Met Pro Arg Gln Glu Val Leu Cys
100 105 110
Ala Ala Cys Asp Ala His Leu Gly His Ile Phe Asp Asp Gly Pro Pro
115 120 125
Pro Thr Gly Lys Arg
130

<210> 736
<211> 163
<212> PRT
<213> Eucalyptus grandis

<400> 736

Met	Val	Asp	Lys	Cys	Gly	Glu	Gly	Leu	Leu	Val	Ala	Val	Glu	Ala	Gln
1				5				10					15		
Lys	Ala	Val	Pro	Ala	Pro	Phe	Leu	Thr	Lys	Thr	Tyr	Gln	Leu	Val	Asp
			20					25					30		
Asp	Pro	Ser	Thr	Asp	His	Ile	Val	Ser	Trp	Gly	Asp	Asp	Asp	Ser	Thr
		35					40					45			
Phe	Val	Val	Trp	Arg	Pro	Pro	Glu	Phe	Ala	Arg	Asp	Leu	Leu	Pro	Asn
		50				55					60				
Tyr	Phe	Lys	His	Asn	Asn	Phe	Ser	Ser	Phe	Val	Arg	Gln	Leu	Asn	Thr
65					70					75				80	
Tyr	Gly	Phe	Arg	Lys	Ile	Val	Pro	Asp	Arg	Trp	Glu	Phe	Ala	Asn	Glu
				85				90						95	
Phe	Phe	Arg	Lys	Gly	Glu	Lys	His	Leu	Leu	Cys	Glu	Ile	His	Arg	Arg
			100					105					110		
Lys	Thr	Ala	Gln	Pro	Gln	Leu	Thr	His	His	His	Pro	His	Ser	Ala	Ser
			115				120					125			
Pro	Leu	Ser	Gly	Pro	Thr	Pro	Ala	Phe	Phe	Pro	Phe	Pro	Ser	Arg	Leu
		130				135					140				
Ser	Ile	Ser	Pro	Ser	Asp	Ser	Asp	Asp	Gln	His	Ser	Ser	His	Trp	Cys
145					150					155					160
Asp	Ser	Pro													

<210> 737
 <211> 172
 <212> PRT
 <213> Eucalyptus grandis

Met	Ala	Leu	Glu	Ala	Leu	Ser	Ser	Pro	Thr	Ala	Pro	Ser	Ala	Pro	Phe
1				5					10					15	
Gln	Phe	Met	Lys	Asp	Ser	Ser	Pro	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ser
			20					25					30		
Ser	Ser	Ser	Ser	Ala	Tyr	Asp	Leu	Pro	Leu	Ala	Glu	Pro	Trp	Ala	Lys
		35				40						45			
Arg	Lys	Arg	Ser	Lys	Arg	Pro	His	Asn	Pro	Pro	Ser	Glu	Asp	Glu	Tyr
	50				55						60				
Leu	Ala	Leu	Cys	Leu	Ile	Met	Leu	Ala	Arg	Gly	Gly	Ala	Gly	Arg	Thr
65					70					75				80	
Leu	Pro	Pro	Pro	Pro	Pro	Pro	Ala	Val	Ser	Ser	Glu	Ala	Ala	Lys	Val
				85				90						95	
Ala	Tyr	Arg	Cys	Pro	Val	Cys	Asp	Lys	Gly	Phe	Pro	Ser	Tyr	Gln	Ala
			100				105						110		
Leu	Gly	Gly	His	Lys	Ala	Ser	His	Arg	Lys	His	Ala	Ser	Ser	Ala	Ala
		115				120						125			
Ala	Ala	Ala	Gly	Gly	Asp	Asp	Gln	Pro	Thr	Thr	Ser	Ser	Thr	Ser	Ala
		130				135					140				
Ala	Thr	Thr	Ser	Ser	Gly	Val	Ser	Gly	Lys	Val	His	Glu	Cys	Ser	Ile
145					150					155					160
Cys	His	Lys	Ser	Phe	Pro	Thr	Gly	Gln	Ala	Leu	Gly				
				165					170						

<210> 738
 <211> 78
 <212> PRT
 <213> Eucalyptus grandis

<400> 738
 Ile Ser Ser Ser Arg Trp Pro Arg Gln Glu Thr Leu Thr Leu Leu Glu
 1 5 10 15
 Ile Arg Ser Arg Leu Asp Pro Lys Phe Lys Glu Ala Asn Gln Lys Gly
 20 25 30
 Pro Leu Trp Asp Glu Val Ser Arg Ile Met Ser Glu Glu His Gly Tyr
 35 40 45
 Asn Arg Ser Gly Lys Lys Cys Arg Glu Lys Phe Glu Asn Leu Tyr Lys
 50 55 60
 Tyr Tyr Lys Thr Thr Lys Glu Gly Lys Ala Gly Arg Gln Asp
 65 70 75

<210> 739
 <211> 135
 <212> PRT
 <213> Eucalyptus grandis

<400> 739
 Met Gly Pro Gln Met Asn Phe Arg Asn Leu Ala Asp Val Pro Ala Ala
 1 5 10 15
 Glu Arg Ser Thr Gly Gly Gln Pro Gly Ile Pro Leu Leu Ser Arg Gln
 20 25 30
 Ser Ser Val Tyr Ser Leu Thr Phe Asn Glu Phe Gln Asn Thr Trp Ser
 35 40 45
 Gly Leu Ser Lys Asp Ile Gly Ser Ile Asn Met Asp Glu Phe Leu Lys
 50 55 60
 Asn Ile Trp Thr Ala Glu Glu Ser Gln Leu Gln Leu Gln Asp Met Ala
 65 70 75 80
 Pro Ser Gly Asn Gly Gly Glu Gly Gly Gly Gln Val Gly Asn Leu Leu
 85 90 95
 Arg Gln Gly Ser Leu Thr Leu Ser Arg Thr Ile Ser Gln Lys Thr Val
 100 105 110
 Asp Glu Val Trp Arg Glu Leu Phe Lys Glu Thr Glu Asp Val Lys Glu
 115 120 125
 Gly Ser Arg Glu Gly Gly Asp
 130 135

<210> 740
 <211> 49
 <212> PRT
 <213> Eucalyptus grandis

<400> 740
 Asp Phe Glu Arg Asn Arg Ala Glu Gly Val Asp Ser Ala Arg Phe Ala
 1 5 10 15
 Glu Leu Met Ile Ser Ser Gly Leu Leu Cys Asn Asp Ala Val Ile Trp
 20 25 30
 Val Thr Phe His Ser Ala Tyr Asp Phe Gly Tyr Leu Val Lys Ile Leu
 35 40 45
 Thr

<210> 741
 <211> 101
 <212> PRT
 <213> Eucalyptus grandis

His	Arg	Phe	His	Ser	Pro	Pro	Val	Pro	Ser	Tyr	Ala	Pro	Ala	Asp	Pro
			100					105					110		
Pro	Ala	Ala	Ala	Asn	Gln	Gly	Asp	Glu	Glu	Glu	Glu	Asp	Asp	Asp	Asp
			115				120					125			
Asp	Glu	Glu	Glu	Gly	Glu	Ser	Asp	Ser	Glu	Ala	Glu	Thr	Gly	Arg	Gln
			130				135				140				
Gly	Ala	Ala	Ala	Ala	Ala	Gln	Asn	Pro	His	Gly	Ala	Gly	Pro	Ala	Asn
						150				155					160
Asn	Ala	Glu	Pro	Ser	Glu	Phe	Glu	Met	Ser	Glu	Asp	Ile	Arg	Leu	Gly
				165					170					175	
Ser	Pro	Asp	Asp	Gly	Ser	Asn	Asn	Leu	Asp	Ser	Asp	Phe	Pro	Met	Leu
			180					185					190		
Thr	Ile	Asn	Ser	Thr	Ala	Ala	Asp								
			195				200								

<210> 744

<211> 327

<212> PRT

<213> Eucalyptus grandis

<400> 744

Asp	Gly	Ser	Cys	Arg	Glu	Pro	Lys	Asp	Gly	Glu	Glu	Ser	Glu	Ala	Thr
1				5				10						15	
Arg	Ile	Leu	Asn	Leu	Arg	Leu	Glu	Asp	Glu	Gly	Gln	Gln	Arg	Met	Arg
			20					25					30		
Lys	Arg	Val	Leu	Asp	Lys	Leu	His	Thr	Val	Phe	Gly	Gly	Ser	Asp	Glu
			35				40					45			
Asp	Asn	Tyr	Ala	Leu	Gly	Leu	Asp	Arg	Val	Thr	Asp	Met	Glu	Met	Phe
	50					55					60				
Phe	Leu	Ala	Ser	Met	Tyr	Phe	Leu	Phe	Pro	Ser	Gly	Glu	Gly	Gly	Pro
	65				70					75					80
Gly	Lys	Cys	Phe	Ala	Ser	Glu	Lys	His	Val	Trp	Leu	Thr	Asp	Ala	Leu
			85					90						95	
Lys	Ser	Ser	Ser	Asp	Tyr	Cys	Val	Arg	Ser	Phe	Leu	Ala	Lys	Ser	Ala
			100					105					110		
Gly	Ile	Arg	Thr	Ile	Val	Leu	Val	Pro	Thr	Asp	Val	Gly	Val	Val	Glu
			115				120					125			
Leu	Gly	Ser	Val	Arg	Ser	Val	Pro	Glu	Ser	Ser	Glu	Leu	Val	Gln	Thr
			130				135				140				
Ile	Arg	Leu	Ser	Phe	Ser	Thr	Asn	Ser	Phe	Met	Ser	Val	Lys	Pro	Ile
					150					155					160
Ala	Ala	Leu	Pro	Met	Thr	Asn	Glu	Lys	Lys	Asp	Glu	Asn	Ala	Pro	Phe
				165					170					175	
Ser	Asn	Leu	Ala	Leu	Ala	Gly	Lys	Gly	Glu	Ala	Ile	Ser	Lys	Ile	Phe
			180					185					190		
Gly	Lys	Glu	Leu	Thr	Thr	Val	Asn	Ser	Pro	Gly	His	Tyr	Arg	Glu	Lys
			195				200					205			
Leu	Ala	Val	Arg	Lys	Met	Asp	Ser	Arg	Gln	Ser	Trp	Glu	Pro	His	His
			210			215					220				
Asn	Gly	Ser	Lys	Leu	Pro	Phe	Ser	Thr	Pro	Arg	Asn	Gly	Thr	Gln	Asp
					230					235					240
Thr	Ser	Trp	Ala	His	His	Ala	His	Gly	Val	Lys	Gln	Leu	Ser	Pro	Val
				245				250						255	
Glu	Phe	Tyr	Gly	Ser	Gln	Thr	Ser	Ala	Ser	Lys	Leu	Glu	Glu	Arg	Met
			260					265					270		
Asn	Ser	Gly	Arg	Asn	Asp	Phe	Gly	Leu	Asn	Arg	Tyr	Pro	Thr	Pro	Lys
			275				280					285			

Gln	Val	Gln	Met	Gln	Ile	Asp	Phe	Thr	Gly	Ala	Thr	Ser	Arg	Pro	Ser
	290					295					300				
Val	Ile	Thr	Arg	Pro	Phe	Thr	Ala	Asp	Ser	Glu	His	Ser	Asp	Val	Glu
305					310					315					320
Ala	Ser	Cys	Lys	Glu	Glu	Gln									
				325											

<210> 745
 <211> 361
 <212> PRT
 <213> Eucalyptus grandis

<400> 745															
Met	Met	Met	Met	Thr	Met	Ala	Ala	Gly	Gly	Gly	Asp	His	His	Ala	Arg
1				5				10						15	
Ser	Thr	Pro	Thr	Val	Gln	Ile	Pro	Pro	Val	Trp	Asp	Pro	Leu	Asp	Asp
			20					25					30		
Pro	Ala	Thr	Gly	Gly	Cys	Gly	Gly	Pro	Tyr	Ser	Pro	Tyr	Ser	Pro	Tyr
		35				40						45			
Ser	Pro	Tyr	Ser	Gly	Gly	Gly	Asn	Ala	Gly	Gly	Ala	Ala	Gly	Gly	Gly
50					55						60				
Glu	Cys	Cys	Asn	Asp	Leu	Thr	Ala	Leu	Arg	Arg	Phe	Leu	Pro	Ser	Asn
65					70					75					80
His	His	Gln	Asp	Glu	Glu	Asp	Glu	Glu	Asp	Gly	Arg	Ala	Pro	Gly	Glu
				85					90					95	
Asp	Gly	Val	Leu	Gly	Cys	Asp	Glu	Phe	Arg	Met	Tyr	Glu	Phe	Lys	Val
			100					105					110		
Arg	Lys	Cys	Ala	Arg	Gly	Arg	Ser	His	Asp	Trp	Thr	Glu	Cys	Pro	Tyr
		115					120					125			
Ala	His	Pro	Gly	Glu	Lys	Ala	Arg	Arg	Arg	Asp	Pro	Arg	Arg	Phe	Phe
		130				135					140				
Tyr	Ser	Gly	Thr	Ala	Cys	Pro	Asp	Phe	Arg	Lys	Gly	Ala	Cys	Lys	Lys
145					150					155					160
Gly	Asp	Thr	Cys	Glu	Phe	Ala	His	Gly	Val	Phe	Glu	Cys	Trp	Leu	His
				165					170					175	
Pro	Glu	Arg	Tyr	Arg	Thr	Gln	Ala	Cys	Lys	Asp	Gly	Gln	Ser	Cys	Arg
			180					185					190		
Arg	Arg	Val	Cys	Phe	Phe	Ala	His	Ser	Pro	Asp	Gln	Leu	Arg	Val	Leu
		195				200						205			
Pro	Ala	His	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	His	Ser
		210				215						220			
Pro	Lys	Ser	Ala	Thr	Asp	Ser	Glu	Phe	Gly	Ser	Pro	Val	Arg	Pro	Ser
225					230					235					240
Ala	Ala	Ala	Ala	Ala	Ala	Phe	Asp	Ser	Tyr	Phe	Thr	Lys	Pro	Trp	Ser
				245					250					255	
Ala	Ser	Phe	Ile	Ser	Ser	Pro	Thr	Ser	Ile	Leu	Thr	Thr	Ser	Ser	Pro
			260					265					270		
Pro	Ile	Ser	Pro	Pro	Thr	Asn	Ser	Pro	Pro	Met	Ser	Pro	Asn	Gln	Arg
		275				280						285			
Gly	Gly	Cys	Cys	Gly	Ser	Pro	Gly	Ser	Val	Ser	Glu	Leu	Val	Ala	Cys
		290				295					300				
Met	Arg	Asn	Met	Gln	Ile	Ala	Lys	Met	Lys	Met	Ser	Pro	Arg	Gly	Gln
305					310					315					320
Met	Gly	Gly	Ser	Leu	Phe	Gly	Ser	Pro	Leu	Arg	Pro	Gly	Cys	His	Leu
				325					330					335	
Ala	Ala	Pro	Val	Thr	Pro	Arg	Ala	Glu	Ser	Ser	Pro	Arg	Tyr	Gly	Gln
			340					345					350		

Leu Gly Gly Gly Gly Gly Gly Gly Leu
 355 360

<210> 746
 <211> 78
 <212> PRT
 <213> Eucalyptus grandis

<400> 746
 Leu Ile Arg Trp Arg Lys His Arg Arg Val Arg Trp Ala Val Gly Ala
 1 5 10 15
 Thr Arg Ala Ala Ser Arg Ala Arg Ser Ser Gly Gly Val Arg Glu
 20 25 30
 Gln Asp Arg Tyr Leu Pro Ile Ala Asn Ile Ser Arg Ile Met Lys Lys
 35 40 45
 Ala Leu Pro Ala Asn Gly Lys Ile Ala Lys Asp Ala Lys Asp Thr Val
 50 55 60
 Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Ile Thr Ser Glu
 65 70 75

<210> 747
 <211> 278
 <212> PRT
 <213> Eucalyptus grandis

<400> 747
 Met Ala Thr Pro Asp Glu Arg Pro Ser Ser Ser Ser Ala Ala Ser
 1 5 10 15
 Ala Val Ala Ile Arg Gln Val Trp Ala Trp Asn Leu Asp Ala Glu Phe
 20 25 30
 Gly Leu Ile Arg Asp Leu Ile Asp Arg Tyr Pro Phe Val Ser Met Asp
 35 40 45
 Thr Glu Phe Pro Gly Leu Val Phe Arg Arg Pro Ala Gly Ala Gly Ala
 50 55 60
 Gly Ala Arg Pro Ser Pro Ser Asp His Tyr Arg Leu Leu Lys Ser Asn
 65 70 75 80
 Val Asp Ala Leu Ser Leu Ile Gln Val Gly Leu Thr Leu Ser Asp Ala
 85 90 95
 Arg Gly Gly Leu Pro Gly Phe Ile Trp Glu Phe Asn Phe Arg Glu Phe
 100 105 110
 Asp Ala Ala Arg Asp Pro His Ala Pro Asp Ser Ile Glu Leu Leu Arg
 115 120 125
 Arg Gln Gly Val Asp Phe Asp Arg Asn Arg Ala Glu Gly Ile Asp Ser
 130 135 140
 Ala Arg Phe Ala Glu Leu Val Met Ser Ser Gly Leu Val Cys Asn Asp
 145 150 155 160
 Ala Val Ser Trp Val Thr Phe His Ser Ala Tyr Asp Phe Gly Tyr Leu
 165 170 175
 Val Lys Ala Leu Thr Arg Arg Glu Leu Pro Gly Asp Leu Pro Glu Phe
 180 185 190
 Leu Ala Val Val Arg Val Phe Phe Gly Asp Arg Val Tyr Asp Val Lys
 195 200 205
 His Leu Met Arg Phe Cys His Ser Leu His Gly Gly Leu Asp Arg Val
 210 215 220
 Ala Ala Ala Leu Glu Leu Asp Arg Ala Val Gly Lys Cys His Gln Ala
 225 230 235 240
 Gly Ser Asp Ser Leu Leu Thr Trp Gln Ala Phe Arg Lys Ile Arg Asp

<213> Eucalyptus grandis

<400> 750

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Met Pro Ile Arg Ile Gln Asn Leu Pro Lys Lys Asn Phe Asp Gln Gly
 1          5          10          15
Ser Ser Leu Ser Met Pro His Val Gly Val Thr Tyr Pro Pro Trp Trp
          20          25          30
Ser Leu Asn Glu Gln Gln Leu Pro Gln Ser Leu Pro Lys Asn Ser Gly
          35          40          45
Leu Lys Ala Glu Ser Pro Pro Met Leu His His Gln Ala Lys His Leu
 50          55          60
Gly Leu Gln Leu Gln Glu Gln Glu Ser Ser Ser Thr Gln Ser Ala Gly
65          70          75          80
Asn Ser Cys His Glu Val Ser Val Val Gly Gly Ala Asn Ser Gln Asp
          85          90          95
Gln Ser Ile Ser Ser Glu Ser Gly Gln Asp Glu Ser Cys Gly Arg Ser
          100          105          110
Phe Glu Gly Gln Thr Lys Pro Ile Phe Met Phe Asn Asn Pro Glu Ile
          115          120          125
Val Phe Asn Ser Ser Leu Ala Asp Gln Asn Gln Pro Leu Ile Arg Val
          130          135          140
Pro Tyr Pro Pro Val Asp Pro Tyr Tyr Gly Gly Leu Leu Thr Ala Tyr
145          150          155          160
Arg Pro Gln Ala Ile Ile Gln Ser Gln Val Gly Ser Gln Met Phe Gly
          165          170          175
Met Ala Pro Gly Arg Val Pro Leu Pro Leu Asn Leu Ala Asp His Gly
          180          185          190
Pro Ile Tyr Val Asn Ala Lys Gln Tyr Ser Arg Asn Ser Ser Glu Glu
          195          200          205
Ala Val
          210

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<210> 751

<211> 93

<212> PRT

<213> Eucalyptus grandis

<400> 751

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Gly Tyr Gly Phe Val Arg Phe Gly Asp Glu Thr Glu Gln Leu Arg Ala
 1          5          10          15
Met Thr Glu Met Asn Gly Met Tyr Cys Ser Ser Arg Pro Met Arg Ile
          20          25          30
Gly Pro Ala Ala Asn Lys Lys Pro Ile Ala Thr Gln Gln Tyr Gln Ser
          35          40          45
Ala Ser Tyr Gln Asn Ser Gln Gly Asn Gln Gly Glu Asn Asp Pro Asn
 50          55          60
Asn Thr Thr Ile Phe Val Gly Gly Leu Asp Pro Ser Val Ser Asp Asp
65          70          75          80
Leu Leu Arg Gln Val Phe Ser Gln Tyr Gly Glu Leu His
          85          90

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<210> 752

<211> 97

<212> PRT

<213> Eucalyptus grandis

<400> 752

Gly	Tyr	Arg	Arg	Ser	Ala	Lys	Lys	Cys	Lys	Glu	Lys	Phe	Glu	Asn	Val
1				5					10					15	
His	Lys	Tyr	Tyr	Lys	Arg	Thr	Lys	Glu	Gly	Arg	Ala	Gly	Arg	Gln	Asp
			20					25					30		
Gly	Lys	Thr	Tyr	Lys	Phe	Phe	Ser	Glu	Leu	Glu	Ala	Leu	His	Asn	Thr
		35					40					45			
Ala	Ala	Gly	Ala	Thr	Val	Gly	Ile	Ser	Ser	Ser	Phe	Lys	Trp	Trp	Trp
	50					55					60				
Cys	Cys	Phe	Trp	His	Cys	Ser	Pro	Gly	Arg	Ser	Leu	Gly	Thr	Pro	Ser
65					70					75					80
Phe	Asp	Arg	Asp	Ile	Val	Arg	Gln	Pro	Arg	Pro	Asn	Leu	His	Cys	Pro
				85					90					95	

Arg

<210> 753
 <211> 241
 <212> PRT
 <213> Eucalyptus grandis

Met	Glu	Met	Glu	Asp	His	His	Gln	Tyr	Thr	Ala	Ala	Asp	Leu	Arg	His
1				5					10					15	
Leu	Ile	Asn	Ala	Arg	Pro	Pro	Pro	Pro	Pro	Pro	His	Ile	Gln	Ser	Ile
			20					25					30		
Ser	Pro	Pro	Glu	Leu	Phe	Cys	Gly	Gly	Gly	Gly	His	Arg	Asn	Pro	Thr
		35					40					45			
Gln	His	Leu	Glu	Ser	Met	Met	Met	Gly	Gly	Gly	Gly	Leu	His	Asn	Gly
	50					55					60				
Gln	Arg	Gln	Gly	His	Ser	His	Asn	His	Gln	His	His	His	Gln	Phe	Gly
65					70				75						80
Arg	Asp	His	Ser	Ser	Pro	Ser	Ser	Val	Ala	Met	Ala	Gly	Ala	Ala	Gly
				85				90					95		
Gly	Leu	Glu	Ser	Glu	Asn	Gly	Gly	Asn	Gly	Arg	Trp	Pro	Arg	Gln	Glu
			100					105					110		
Thr	Leu	Thr	Leu	Leu	Glu	Ile	Arg	Ser	Arg	Leu	Asp	Ser	Arg	Phe	Lys
		115					120					125			
Glu	Ala	Asn	Gln	Lys	Gly	Pro	Leu	Trp	Asp	Glu	Val	Ser	Arg	Ile	Met
	130					135					140				
Ser	Glu	Glu	His	Gly	Tyr	Gln	Arg	Ser	Gly	Lys	Lys	Cys	Arg	Glu	Lys
145					150					155					160
Phe	Glu	Asn	Leu	Tyr	Lys	Tyr	Tyr	Lys	Lys	Thr	Lys	Glu	Gly	Lys	Ala
			165						170					175	
Gly	Arg	Gln	Asp	Gly	Lys	His	Tyr	Arg	Phe	Phe	Arg	Gln	Leu	Glu	Ala
		180						185					190		
Leu	Tyr	Gly	Glu	Asn	Ala	Asn	Ser	Asn	Ser	Ile	Leu	Gln	Ala	Pro	Ser
		195					200					205			
Leu	Pro	His	Ser	Leu	His	Phe	His	Pro	Pro	Pro	Asn	Ile	Asn	Asp	Ile
	210					215					220				
Asn	Gln	Asp	Ala	Ser	His	His	Arg	His	Pro	His	Gln	Leu	Gln	Arg	Pro
225					230					235					240

Cys

<210> 754
 <211> 104
 <212> PRT

<213> Eucalyptus grandis

<400> 754

Met Glu Arg Gly Asp Pro Asn Val Val Ala Val Ala Arg Leu Arg Arg
1 5 10 15
Glu Asp Cys Glu Arg Thr Lys His Asp Ser Ala Phe Ala Thr Trp Lys
20 25 30
Val Leu Val Gly Pro Thr Asp Trp Glu Asp Tyr Ser Leu Gly Lys Glu
35 40 45
Gly Ala Ala Arg Tyr Arg Val His Asn Leu Pro Lys Ser Pro Gly Pro
50 55 60
Gly Ile Tyr Glu Leu Gly Val Ala Ala Ser His Ala Lys Leu Gly Arg
65 70 75 80
Glu Ile Ala Lys Leu Asp Pro Arg Tyr Ile Val Val Val Tyr Leu Gly
85 90 95
Lys Ala Asp Cys Val Arg Thr Arg
100

<210> 755

<211> 229

<212> PRT

<213> Eucalyptus grandis

<400> 755

Met Gly Tyr Ala Gln Leu Val Ile Gly Pro Ala Gly Ser Gly Lys Ser
1 5 10 15
Thr Tyr Cys Ser Ser Leu Tyr Gln His Cys Glu Ala Ile Gly Arg Thr
20 25 30
Ile His Ile Val Asn Leu Asp Pro Ala Ala Glu Asn Phe Asp Tyr Pro
35 40 45
Val Ala Met Asp Ile Arg Glu Leu Ile Ser Leu Asp Asp Val Met Glu
50 55 60
Glu Leu Gly Leu Gly Pro Asn Gly Gly Leu Met Tyr Cys Met Glu His
65 70 75 80
Leu Glu Glu Asn Leu Asp Asp Trp Leu Thr Glu Glu Leu Asp Asn Tyr
85 90 95
Leu Asp Asp Asp Tyr Leu Val Phe Asp Cys Pro Gly Gln Ile Glu Leu
100 105 110
Phe Ser His Val Pro Val Leu Arg Asn Phe Val Glu His Leu Gln Arg
115 120 125
Lys Asn Phe Asn Val Cys Gly Val Tyr Leu Leu Asp Ser Gln Phe Ile
130 135 140
Thr Asp Val Thr Lys Phe Ile Ser Gly Cys Met Ala Ser Leu Ser Ala
145 150 155 160
Met Val Gln Leu Glu Leu Pro His Val Asn Ile Leu Ser Lys Met Asp
165 170 175
Leu Val Lys Asn Lys Arg Asp Ile Asp Asp Tyr Leu Asn Pro Glu Pro
180 185 190
Arg Val Leu Leu Ser Glu Leu Asn Gln Thr Met Ala Pro Lys Phe Glu
195 200 205
Lys Leu Asn Lys Ala Leu Ala Glu Leu Val Asp Glu Tyr Ser Met Val
210 215 220
Ser Phe Ile Pro Leu
225

<210> 756

<211> 81

<212> PRT
 <213> Eucalyptus grandis

<400> 756
 Tyr Pro Thr Ile Ile Tyr Arg Pro Tyr Ser Phe Met Ala Lys Ile Ser
 1 5 10 15
 Ala Val Glu Arg Gly His Phe Leu Thr Val Ile Pro His Phe Ala Trp
 20 25 30
 Arg Leu Val Asn Pro Ala Thr Leu Lys Tyr Phe Asp Ala Pro His Arg
 35 40 45
 Pro Met Tyr Met Gln Glu Tyr Leu Tyr Ser Ile Arg Asn His Arg Tyr
 50 55 60
 Thr Ala Thr Met Leu Gln His Ile Ala Glu Asp Arg Asp Gly Thr Ser
 65 70 75 80
 His

<210> 757
 <211> 115
 <212> PRT
 <213> Eucalyptus grandis

<400> 757
 Met Pro Lys Gly Ser Ser Ile Lys Met Gly Val Pro Leu Gln His Ser
 1 5 10 15
 Ser Gly Ile Lys Gln Leu Asn Val His Phe Gln Glu Arg Asp Leu Cys
 20 25 30
 Ser Thr Gln Ser Thr Ser Gln Ser Phe Ser Glu Val Pro Asn Ile Gly
 35 40 45
 Gly Ser Thr Asp Cys Ser Gln Ala Thr Val Leu Glu Gln Thr Glu His
 50 55 60
 Gly Glu Thr Glu Gly Gln Ser Val Arg Gly Gln Ala Lys Ser Ala Leu
 65 70 75 80
 Ser Met Gly Thr Gln Asp Leu Val Phe Gln Pro Leu Glu Val Cys Ile
 85 90 95
 Pro Leu His Tyr Ala Glu Pro Ser Leu Gly Gly Phe Met Pro Ala Ala
 100 105 110
 Tyr Gly Pro
 115

<210> 758
 <211> 356
 <212> PRT
 <213> Eucalyptus grandis

<400> 758
 Met Lys Glu Arg Gln Arg Trp Arg Ala Glu Glu Asp Ala Leu Leu Arg
 1 5 10 15
 Ala Tyr Val Lys Gln Tyr Gly Pro Arg Glu Trp His Leu Val Ser Gln
 20 25 30
 Arg Met Asn Thr Pro Leu Asn Arg Asp Ala Lys Ser Cys Leu Glu Arg
 35 40 45
 Trp Lys Asn Tyr Leu Lys Pro Gly Ile Lys Lys Gly Ser Leu Ser Glu
 50 55 60
 Glu Glu Gln Arg Leu Val Ile Gln Leu Gln Ala Lys His Gly Asn Lys
 65 70 75 80
 Trp Lys Lys Ile Ala Ala Glu Ile Pro Gly Arg Thr Ala Lys Arg Leu

<212> PRT
 <213> Eucalyptus grandis

<400> 760
 Glu Asp Pro Val Gly Arg Pro Glu Ser Ala Ser Glu Ile Ser Gln Glu
 1 5 10 15
 Pro Gly Gln Glu Phe Met Asp Glu Asp Glu Leu Leu Asn Met Pro Lys
 20 25 30
 Leu Leu Asp Asp Met Ala Glu Gly Met Leu Val Ser Pro Pro Arg Thr
 35 40 45
 Gln Met Ala Ser Glu Asn Asp Ser Pro Glu Asp Ser Asp Gly Gly Glu
 50 55 60
 Ser Leu Trp Ser Tyr Pro
 65 70

<210> 761
 <211> 243
 <212> PRT
 <213> Eucalyptus grandis

<400> 761
 Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Val Glu Glu Arg Leu Asp
 1 5 10 15
 Arg Arg Arg Pro Gly Ser Cys Arg Pro Glu Arg Lys Leu Thr Pro His
 20 25 30
 Glu Leu Trp Ser Glu Leu Asp Pro Ala Ser Asp Leu Leu Ser Leu Asp
 35 40 45
 Gly Pro Val Ala Gln Gly His Pro Asn Pro Phe Ser Leu Val Ala Asn
 50 55 60
 Gln Leu Asn Gln Val Met Lys Ser Glu Glu Lys Asn Ser Glu Glu Ala
 65 70 75 80
 Gly His Gly His Val Ser Glu Thr Gln Lys Ser Gln Ser Asn Gly Arg
 85 90 95
 Ser Gln Arg Ala Arg Lys Asn Val Tyr Arg Gly Ile Arg Gln Arg Pro
 100 105 110
 Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro His Lys Gly Val Arg
 115 120 125
 Val Trp Leu Gly Thr Phe Lys Thr Ala Glu Glu Ala Ala Arg Ala Tyr
 130 135 140
 Asp Glu Ala Ala Lys Arg Ile Arg Gly Asp Lys Ala Lys Leu Asn Phe
 145 150 155 160
 Ser Gly Pro Pro Ala Pro Ala Gln Pro Ser Ala Lys Lys Arg Cys Val
 165 170 175
 Ala Pro Asp Glu Pro Lys Asp Glu Ala Gly Ala Ala Gly Cys Glu Leu
 180 185 190
 Lys Glu Arg Ile Ala Ser Leu Glu Ser Phe Leu Glu Leu Glu Pro Thr
 195 200 205
 Glu Glu Pro Leu Glu Pro Gly Thr Gly Pro Ser Pro Ala Asp Leu Trp
 210 215 220
 Met Leu Glu Asp Leu Val Thr His His Gln His Arg Phe Asp Asn Gln
 225 230 235 240
 Leu Val Tyr

<210> 762
 <211> 125
 <212> PRT

<213> Eucalyptus grandis

<400> 762

Gln Gln Arg Leu Leu Gln Tyr Trp Ser Asp Ala Leu Asn Leu Ser Pro
1 5 10 15
Arg Gly Arg Met Met Met Met Asn Arg Leu Gly Pro Asp Gly Arg Pro
20 25 30
Ile Phe Arg Pro Pro Gln Pro Ile Asn Thr Thr Lys Leu Tyr Arg Gly
35 40 45
Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro
50 55 60
Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Asp
65 70 75 80
Ala Ala Leu Ala Tyr Asp Arg Glu Ala Phe Lys Leu Arg Gly Glu Asn
85 90 95
Ala Arg Leu Asn Phe Pro Glu Leu Phe Leu Asn Lys Asp Lys Ala Glu
100 105 110
Glu Ser Ala Gly Pro Ser Ser Ser Ser Ser Ser Pro Pro
115 120 125

<210> 763

<211> 141

<212> PRT

<213> Eucalyptus grandis

<400> 763

Ser Ile Pro Ser Val Gly Leu Leu Val Gln Tyr Lys Leu Leu Asn Pro
1 5 10 15
Ala Ser Ser Tyr Ser Ser Cys Ile Met Ile Gln Asp Met Ser Gln Gly
20 25 30
Phe Arg Lys Ile Asp Thr Asp Arg Trp Glu Phe Ala Asn Arg Gly Phe
35 40 45
Gln Glu Gly Lys Lys His Leu Leu Lys Asn Ile Arg Arg Arg Arg Lys
50 55 60
Leu Ser Asp His Arg Thr Thr Ser Ser Ser Thr Val Ala Ser Asp Tyr
65 70 75 80
Pro Glu Ala Gly Lys Glu Ala Glu Leu Glu Met Leu Lys Arg Asp Gln
85 90 95
Glu Ala Leu Lys Ala Glu Ile Leu Lys Leu Arg Glu Glu Arg Glu Asn
100 105 110
Ser Gln His Glu Ile Asn Gln Val Ile Glu Arg Phe Arg Tyr Ala Glu
115 120 125
Cys Arg Cys Arg Arg Met Phe Leu Phe Leu Ser Lys Ala
130 135 140

<210> 764

<211> 202

<212> PRT

<213> Eucalyptus grandis

<400> 764

Lys His Leu Leu Asn Asn Ile Tyr Arg Arg Lys Pro Ile His Ser His
1 5 10 15
Ser Gly Gln Gly Ala Arg Leu Ser Asp Ser Glu Lys Gln Met Tyr Glu
20 25 30
Glu Glu Ile Lys Arg Leu Arg His Glu Lys Ser Ser Leu Gln Leu Glu
35 40 45

[illegible]

<400> 768

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<210> 769
<211> 218
<212> PRT
<213> Eucalyptus grandis
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<400> 769

245

Glu Ser Asp Leu Gln Asp Lys Ala Leu Gln Leu Gly Thr Ile Val Pro
 100 105 110
 Pro Arg Pro Ala Ala Cys Gly Ile Gln Ala Leu Ala Ser Thr Thr Pro
 115 120 125
 Arg Ser Gly Gln Gln Leu Pro Tyr Arg Asn Pro Tyr Gln Asn Pro Tyr
 130 135 140
 Tyr Ser Ala Asn Ser
 145

<210> 774
 <211> 175
 <212> PRT
 <213> Eucalyptus grandis

<400> 774
 Met Val Lys Arg Asp Arg Glu Asp Thr Glu Val Glu Ala Leu Ala Arg
 1 5 10 15
 Ala Asn Cys Leu Met Leu Leu Ser Arg Val Gly Glu Ser Thr Asp Ser
 20 25 30
 Ala Ser Pro Asp Arg Lys Ser Arg Pro Thr Glu Arg Met Phe Ala Cys
 35 40 45
 Lys Thr Cys Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His
 50 55 60
 Lys Ala Ser His Lys Lys Pro Lys Leu Ile Ser Gly Asp Leu Phe His
 65 70 75 80
 Leu Gly His Ala Ala Asp Ser Ser Pro Ala Lys Pro Lys Thr His Glu
 85 90 95
 Cys Ser Ile Cys Gly Leu Asp Phe Pro Met Gly Gln Ala Leu Gly Gly
 100 105 110
 His Met Arg Arg His Arg Ala Ala Met Leu Glu Ser Leu Ala Ala Ala
 115 120 125
 Ala Ala Lys Pro Val Pro Val Leu Lys Lys Ser Asn Ser Lys Arg Val
 130 135 140
 Thr Gly Leu Asp Leu Asn Ser Leu Pro Met Glu Asp Asp Leu Thr Leu
 145 150 155 160
 Arg Leu Gly Lys Val Ala Pro Pro Leu Val Leu Asp Leu Val Leu
 165 170 175

<210> 775
 <211> 154
 <212> PRT
 <213> Eucalyptus grandis

<400> 775
 Pro Asp Ala Ala Gly Glu Arg Leu Gly His Gly Asp Gln Glu Glu Pro
 1 5 10 15
 Leu Gly Val Gly Gly Val Gly Leu Pro Gly Arg Ala Tyr Phe Ser Ser
 20 25 30
 Asn Pro Ala Trp Val Thr Gly Ala Glu Arg Leu Gly Asn Cys Gly Cys
 35 40 45
 Asp Arg Ala Arg Gln Ala Gln Ile Phe Gly Leu Gln Thr Ile Ala Cys
 50 55 60
 Val Pro Val Leu Asn Gly Val Val Glu Leu Gly Ser Thr Glu Pro Ile
 65 70 75 80
 Tyr Gln Ser Ser Asp Leu Ile Ser Gly Ile Arg Gly Leu Phe Asn Phe
 85 90 95
 His Glu Ser Glu Met Gly Cys Gly Gly Arg Val Leu Asn Ser Glu His

			100					105				110					
Asp	Pro	Ala	Ser	Leu	Trp	Ile	Cys	Asp	Pro	Pro	Val	Thr	Met	Glu	Ile		
		115					120					125					
Asn	Asp	Arg	Pro	Met	Thr	Phe	Gln	Ile	Glu	Asn	Pro	Ser	Ser	Ser	Ser		
	130					135					140						
Leu	Thr	Glu	Ser	Pro	Ser	Ala	Ile	Cys	Ala								
145					150												

<210> 776
 <211> 177
 <212> PRT
 <213> Eucalyptus grandis

Leu	Gly	Thr	Gln	Ile	Pro	Ser	Gly	Ile	His	Met	Pro	Ser	Ala	Asn	Leu		
1				5				10						15			
Ser	Ser	Ile	Ser	Ile	Leu	Gly	Pro	Ile	Pro	Met	Val	Ser	Gly	Asp	Gly		
			20					25					30				
Gly	Gly	Arg	Thr	Gly	Ser	Glu	Arg	Ser	Arg	Asn	Ala	Asp	Cys	Ala	Pro		
		35					40					45					
Ala	Gly	Phe	Pro	Gly	Gly	Asp	Glu	Asp	Val	Asn	Lys	Gly	Gly	Asp	Ile		
	50					55					60						
Pro	Tyr	Gly	Met	Ser	Thr	Ile	Val	Arg	Val	Ile	Pro	Asn	Ser	Arg	Tyr		
65				70						75					80		
Leu	Arg	Val	Ala	Gln	Gln	Leu	Leu	Asp	Glu	Ile	Val	Asn	Val	Arg	Lys		
				85				90						95			
Ala	Leu	Lys	Arg	Pro	Asp	Asp	Ala	Asn	Asp	Gln	Ser	Arg	His	Glu	Asn		
			100					105					110				
Gln	Arg	Ser	Pro	Lys	Asp	Ala	Asp	Gly	Gly	Ser	Lys	Asn	Glu	Ala	Ser		
	115					120						125					
Ser	Asn	Pro	Gln	Glu	Ser	Ala	Ser	Asn	Ser	Ser	Glu	Leu	Ser	Ala	Ala		
	130					135					140						
Glu	Lys	Gln	Asp	Leu	Gln	Asn	Lys	Leu	Thr	Lys	Leu	Leu	Ser	Met	Leu		
145				150						155					160		
Asp	Glu	Val	Asp	Lys	Arg	Tyr	Lys	Gln	Tyr	Tyr	His	Gln	Met	Gln	Ile		
			165					170						175			
Val																	

<210> 777
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

Gly	Asn	Glu	Val	Ser	Ser	Asp	Tyr	Gly	Trp	Lys	Phe	Leu	Phe	Ala	Gly		
1				5				10						15			
Leu	Gln	Arg	Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu		
			20					25					30				
Arg	Pro	Asp	Ile	Lys	Arg	Gly	Asn	Ile	Ser	Pro	Asp	Glu	Glu	Glu	Leu		
		35					40					45					
Ile	Ile	Arg	Leu	His	Lys	Leu	Leu	Gly	Asn	Arg							
	50					55											

<210> 778
 <211> 175
 <212> PRT

<213> Eucalyptus grandis

<400> 778

Met	His	His	Pro	Pro	Asn	Pro	Asp	Ser	Leu	Ser	Leu	Leu	Gln	Ser	Ala
1				5					10					15	
Arg	Thr	Pro	Asn	Ala	Pro	Pro	Glu	His	Pro	Val	Pro	Ser	Thr	Ser	Arg
			20					25					30		
Arg	Asp	Glu	Val	Ala	Val	Leu	Lys	Ser	Gln	Lys	Ala	Gly	Arg	Glu	Lys
		35					40					45			
Leu	Arg	Arg	Asp	Arg	Leu	Asn	Glu	His	Phe	Ile	Glu	Leu	Gly	Asn	Thr
	50					55					60				
Leu	Asp	Pro	Asp	Arg	Pro	Lys	Asn	Asp	Lys	Ala	Thr	Ile	Leu	Ser	Asp
65					70					75					80
Thr	Val	Gln	Leu	Leu	Lys	Asp	Leu	Thr	Ala	Gln	Val	Asn	Gln	Leu	Lys
				85					90					95	
Ala	Glu	Tyr	Ser	Thr	Phe	Cys	Glu	Glu	Ser	Arg	Glu	Leu	Thr	Gln	Glu
			100					105					110		
Lys	Asn	Asp	Leu	Lys	Glu	Glu	Lys	Ala	Ser	Leu	Lys	Ser	Asp	Ile	Glu
		115					120					125			
Ser	Leu	Asn	Ala	Gln	Tyr	Gln	Gln	Arg	Ala	Arg	Ala	Met	Phe	Pro	Trp
		130				135					140				
Pro	Ile	Met	Asp	His	Ser	Val	Val	Met	Ala	Pro	Pro	Ser	Tyr	Pro	Tyr
145					150					155					160
Pro	Val	Pro	Val	Ala	Val	Pro	Ser	Gly	Pro	Ile	Pro	Val	His	Pro	
				165					170					175	

<210> 779

<211> 162

<212> PRT

<213> Eucalyptus grandis

<400> 779

Met	Asn	Val	Glu	Lys	Leu	Met	Lys	Met	Ala	Gly	Ser	Val	Arg	Thr	Gly
1				5					10					15	
Gly	Lys	Gly	Thr	Met	Arg	Arg	Lys	Lys	Lys	Ala	Val	His	Lys	Thr	Thr
			20					25					30		
Thr	Thr	Asp	Asp	Lys	Arg	Leu	Gln	Ser	Thr	Leu	Lys	Arg	Ile	Gly	Val
		35					40					45			
Asn	Ala	Ile	Pro	Ala	Ile	Glu	Glu	Val	Asn	Ile	Phe	Lys	Asp	Asp	Val
		50				55					60				
Val	Ile	Gln	Phe	Val	Asn	Pro	Lys	Val	Gln	Ala	Ser	Ile	Ala	Ala	Asn
65					70				75					80	
Thr	Trp	Val	Val	Ser	Gly	Ala	Pro	Gln	Thr	Lys	Lys	Leu	Gln	Asp	Ile
			85					90						95	
Leu	Pro	Gly	Ile	Asn	Gln	Leu	Gly	Pro	Asp	Asn	Leu	Asp	Asn	Leu	
		100					105					110			
Arg	Lys	Leu	Ala	Glu	Gln	Phe	Gln	Lys	Gln	Ser	Pro	Gly	Ala	Ala	Ala
		115					120					125			
Thr	Ala	Gly	Ala	Thr	Ala	Met	Gln	Glu	Asp	Asp	Asp	Asp	Glu	Val	Pro
	130					135					140				
Glu	Leu	Val	Pro	Gly	Glu	Thr	Phe	Glu	Ala	Ala	Ala	Glu	Glu	Gly	His
145					150					155					160
Lys	Ser														

<210> 780

<211> 151

<212> PRT
 <213> Eucalyptus grandis

<400> 780

Met	Gly	Glu	Pro	Ile	Phe	Leu	Pro	Gly	Arg	Thr	Ser	Leu	Val	Gly	Ser
1				5				10						15	
Ile	Ser	Val	Asn	Val	Val	Gly	Ile	Gln	His	Asn	Ala	Gly	Thr	Phe	Arg
			20					25					30		
Ala	Gly	Glu	Thr	Val	Ala	Leu	Val	Arg	Glu	Pro	Ser	Asn	Thr	Asp	Asp
		35					40					45			
Glu	Met	Ala	Ile	Gln	Val	Leu	Asn	Thr	Arg	Gly	Met	Val	Val	Gly	Tyr
	50					55					60				
Ile	Lys	Arg	Glu	Ala	Ala	Lys	Val	Leu	Ala	Pro	Leu	Ile	Asp	Ser	Gln
65					70					75					80
Leu	Ile	Ser	Val	Tyr	Ala	Ile	Val	Pro	Lys	Val	Pro	Arg	Val	Glu	Lys
			85						90					95	
Leu	Phe	Phe	Ile	Asn	Cys	Gln	Val	Arg	Val	Leu	Ala	Arg	Asp	Asp	Asp
			100					105					110		
Phe	Glu	His	Val	Lys	Ser	Thr	Ile	Leu	Glu	Gly	Lys	Leu	Met	Leu	Thr
		115					120					125			
Pro	Pro	Val	Gly	Lys	Glu	Val	Arg	Gly	Val	Asn	Glu	Ser	Phe	Thr	Leu
		130				135					140				
Val	Gly	Gln	Gly	Val	Glu	Lys									
145						150									

<210> 781
 <211> 611
 <212> PRT
 <213> Eucalyptus grandis

<400> 781

Met	Met	Met	Phe	Glu	Asp	Met	Gly	Ile	Cys	Gly	Asp	Leu	Asp	Phe	Phe
1				5				10						15	
Ser	Ala	Pro	Leu	Gly	Glu	Gly	His	Gly	Val	Ala	Pro	Gln	Thr	Glu	Pro
			20					25					30		
Glu	Ala	Thr	Val	Glu	Asp	Asp	Tyr	Ser	Asp	Glu	Glu	Ile	Asp	Val	Asp
		35					40					45			
Glu	Leu	Glu	Arg	Arg	Met	Trp	Arg	Asp	Lys	Met	Arg	Leu	Lys	Arg	Leu
	50					55				60					
Lys	Glu	Gln	Asn	Lys	Gly	Lys	Glu	Gly	Val	Asp	Ile	Ala	Lys	Gln	Arg
65					70					75					80
Gln	Ser	Gln	Glu	Gln	Ala	Arg	Arg	Lys	Lys	Met	Ser	Arg	Ala	Gln	Asp
			85						90					95	
Gly	Ile	Leu	Lys	Tyr	Met	Leu	Lys	Met	Met	Glu	Val	Cys	Lys	Ala	Gln
		100						105					110		
Gly	Phe	Val	Tyr	Gly	Ile	Ile	Pro	Glu	Lys	Gly	Lys	Pro	Val	Thr	Gly
		115					120					125			
Ala	Ser	Asp	Asn	Leu	Arg	Glu	Trp	Trp	Lys	Asp	Lys	Val	Arg	Phe	Asp
		130				135					140				
Arg	Asn	Gly	Pro	Ala	Ala	Ile	Ala	Lys	Tyr	Gln	Ala	Asp	His	Ser	Val
145					150					155					160
Pro	Gly	Lys	Asn	Asp	Gly	Cys	Asn	Pro	Ile	Gly	Pro	Thr	Pro	His	Thr
			165					170						175	
Leu	Gln	Glu	Leu	Gln	Asp	Thr	Thr	Leu	Gly	Ser	Leu	Leu	Ser	Ala	Leu
			180					185					190		
Met	Gln	His	Cys	Asp	Pro	Pro	Gln	Arg	Arg	Phe	Pro	Leu	Glu	Lys	Gly
		195					200					205			

<212> PRT
 <213> Eucalyptus grandis

<400> 786

Glu	Thr	Ser	Pro	Ser	Ser	Ser	Ser	Leu	Thr	Thr	Thr	Thr	Ala	Pro	Ala
1				5					10					15	
Pro	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Thr	Thr	Ser	Ser	Ser	Ser	Tyr	Ser
			20					25					30		
Ser	Ala	Val	Ala	Val	Ala	Ala	Thr	Thr	Ala	Thr	Thr	Ser	Ser	Ser	Ser
		35					40					45			
Thr	Ser	Ser	Thr	Gly	Ser	Asp	Pro	Ala	Leu	Glu	Pro	Ser	Lys	Arg	Ser
	50					55					60				
Glu	Asp	Cys	Thr	Ser	Gln	Lys	Gly	Pro	Gly	Lys	Ser	Pro	Ser	Pro	Gly
65					70					75					80
Ala	His	Pro	Glu	Glu	Pro	Ala	Gly	Lys	Arg	His	Lys	Ala	Gly	Gly	Ser
				85					90					95	
Gly	Glu	His	Pro	Thr	Tyr	Arg	Gly	Val	Arg	Met	Arg	Asn	Trp	Gly	Lys
			100					105					110		
Trp	Val	Ser	Glu	Ile	Arg	Glu	Pro	Arg	Lys	Lys	Ser	Arg	Ile	Trp	Leu
		115					120					125			
Gly	Thr	Tyr	Pro	Thr	Ala	Glu	Met	Ala	Ala	Arg	Ala	His	Asp	Val	Ala
	130					135					140				
Ala	Leu	Ala	Ile	Lys	Gly	Ser	Phe								
145						150									

<210> 787
 <211> 148
 <212> PRT
 <213> Eucalyptus grandis

<400> 787

Met	Phe	Pro	Arg	Pro	Lys	Val	Asp	Pro	Ala	Ser	Ala	Gly	Thr	Val	Val
1				5					10					15	
Ile	Arg	Glu	Val	Trp	Ala	His	Asn	Leu	Glu	Ser	Glu	Phe	Asp	Leu	Ile
			20					25					30		
Arg	Asp	Val	Val	Asp	Thr	His	Pro	Phe	Ile	Ser	Met	Asp	Thr	Glu	Phe
		35					40					45			
Pro	Gly	Val	Val	Phe	Arg	Pro	Pro	Pro	Pro	Pro	Ser	Ala	Gly	Gly	His
	50					55					60				
Tyr	Arg	Arg	Leu	Arg	Pro	Ser	Asp	His	Tyr	Arg	Leu	Leu	Lys	Ser	Asn
65					70				75					80	
Val	Asp	Ala	Leu	Ser	Leu	Ile	Gln	Val	Gly	Leu	Thr	Phe	Ser	Asp	Pro
			85					90					95		
Asp	Gly	Asn	Leu	Pro	Asp	Leu	Gly	Cys	Pro	Gly	Gly	Pro	Arg	Tyr	Ile
		100					105						110		
Trp	Glu	Phe	Asn	Phe	Arg	Asp	Phe	Asp	Val	Ala	Arg	Asp	Ala	His	Ala
		115					120					125			
Pro	Asp	Ser	Ile	Glu	Leu	Leu	Arg	Arg	Gln	Gly	Ile	Asp	Phe	Glu	Arg
	130					135					140				
Asn	Arg	Ala	Glu												
145															

<210> 788
 <211> 248
 <212> PRT
 <213> Eucalyptus grandis

Ser Ser Pro Ala Ser Ser Leu Ser Ser Ala Ile Ser Ala Ser Asn Ile
20 25 30
Asn Ser Asn Pro Ala Tyr Pro Thr Ser Ser Ser Ser Ser Ser Ser
35 40 45
Cys Ser Pro Leu Cys Leu Glu Leu Trp His Ala Cys Ala Gly Pro Leu
50 55 60
Ile Ser Leu Pro Lys Arg Gly Ser Leu Val Val Tyr Phe Pro Gln Gly
65 70 75 80
His Leu Glu His Val Ser Asp Phe Pro Thr Ser Val Phe Asp Leu Pro
85 90 95
Ser Gln Ile Phe Cys Arg Val Val Asp Val Lys Leu His Ala Asp Ala
100 105 110
Ser Thr Asp Asp Val Tyr Ala Gln Val Ser Leu Val Pro Glu Arg Glu
115 120 125
Gln Ile Glu His Lys Leu Arg Glu Gly Asp Asn Glu Ile Asp Leu Asp
130 135 140
Glu Asp Glu Ile
145

<210> 791
<211> 106
<212> PRT
<213> Eucalyptus grandis

<400> 791
Met Ala Ser His Pro Ser Asn His Ser Cys Gly Arg Pro His Gln Gly
1 5 10 15
Ala Phe Ala Asp Ala Leu Tyr Lys Glu Leu Trp His Ala Cys Ala Gly
20 25 30
Pro Leu Val Thr Leu Pro Arg Glu Gly Glu Arg Val Tyr Tyr Phe Pro
35 40 45
Gln Gly His Met Glu Gln Leu Glu Ala Ser Thr Asn Arg Gly Leu Glu
50 55 60
Gln Gln Met Pro Ser Phe Asp Leu Pro Ser Lys Ile Leu Cys Arg Val
65 70 75 80
Val Asn Ile Gln Leu Arg Ala Glu Pro Glu Thr Asp Glu Val Tyr Ser
85 90 95
Gln Ile Thr Leu Leu Pro Glu Pro Glu Gln
100 105

<210> 792
<211> 82
<212> PRT
<213> Eucalyptus grandis

<400> 792
Glu Gln Tyr Leu Asn Leu Ala Tyr Val Gln Gln Leu Glu Asn Ser Arg
1 5 10 15
Phe Arg Leu Met Gln Leu Glu Gln Glu Leu Gln Arg Ala Arg Gln Gln
20 25 30
Gly Ile Phe Val Ser Ser Gly Asn Pro Gly Asp Leu Ser His Asn Met
35 40 45
Ala Ala Ile Gly Asn Gly Ala Met Ala Phe Asp Thr Asp Tyr Ala Arg
50 55 60
Trp Leu Asp Glu His Gln Arg Leu Ile Asn Asp Leu Arg Ser Gly Val
65 70 75 80
Asn Phe

<210> 793
 <211> 247
 <212> PRT
 <213> Eucalyptus grandis

<400> 793

Phe	Phe	Leu	Tyr	Ile	Ile	Ser	Leu	Phe	Leu	Val	Arg	Glu	Asn	Ser	Glu
1				5				10					15		
Arg	Ser	Arg	Glu	Gly	Thr	Ser	Ser	Asn	Gly	Asp	Gly	Lys	Ser	Glu	Val
			20					25					30		
Gln	Gly	Lys	Val	Ala	Gly	Glu	Val	Asp	Ala	Ala	Ser	Glu	Asn	Val	Ser
		35					40					45			
Gly	Gly	Ala	Ile	Glu	Arg	Pro	Arg	Ala	Thr	Gly	Lys	Leu	Ala	Ala	Pro
	50					55					60				
Val	Asn	Ser	Pro	Ser	Met	Ser	Ser	Ser	Leu	Asp	Leu	Lys	Asn	Ser	Cys
65					70					75					80
Met	Asp	Ala	Asn	Ala	Asn	Pro	Val	Ser	Ile	Leu	Gln	Pro	Gly	Val	Val
				85					90					95	
Pro	Pro	Glu	Ala	Trp	Leu	Gln	Asn	Glu	Arg	Glu	Leu	Lys	Arg	Glu	Arg
			100					105					110		
Arg	Lys	Gln	Ser	Asn	Arg	Glu	Ser	Ala	Arg	Arg	Ser	Arg	Leu	Arg	Lys
		115					120					125			
Gln	Ala	Glu	Thr	Glu	Glu	Leu	Ala	Lys	Lys	Val	Asp	Ser	Leu	Ser	Ala
	130					135					140				
Glu	Asn	Arg	Ala	Leu	Lys	Ser	Glu	Ile	Ser	Gln	Leu	Thr	Glu	Asn	Ser
145					150					155					160
Asp	Lys	Leu	Arg	Leu	Glu	Asn	Ala	Thr	Leu	Met	Glu	Arg	Leu	Glu	Asn
				165					170					175	
Ala	Gln	Gly	Val	Glu	Lys	Ala	Val	Glu	Ser	Leu	Gly	Lys	Phe	Asn	Asp
			180					185					190		
Asn	Gly	Leu	Leu	Ser	Asp	Lys	Thr	Glu	Asn	Leu	Leu	Ser	Arg	Val	Asn
	195						200					205			
Asn	Ser	Gly	Ala	Val	Asp	Arg	Arg	Ser	Glu	Asp	Glu	Gly	Glu	Ile	Tyr
	210					215					220				
Glu	Arg	Lys	Ser	Asn	Ser	Gly	Ala	Lys	Leu	His	Gln	Leu	Leu	Asp	Ser
225					230					235					240
Lys	Pro	Arg	Thr	Asp	Ala	Val									
				245											

<210> 794
 <211> 145
 <212> PRT
 <213> Eucalyptus grandis

<400> 794

Phe	Ser	Leu	Ser	Pro	His	His	Leu	Lys	Met	Glu	Val	Ala	Pro	Gln	Ala
1				5				10						15	
Glu	His	His	Gln	Asn	His	His	His	His	His	His	Gln	Tyr	His	His	Gln
			20					25					30		
Pro	Gln	Gln	Gly	Glu	Pro	Gly	Ser	Tyr	Phe	Leu	Ser	Ala	Pro	Pro	Pro
		35					40					45			
Pro	Pro	His	Tyr	Ser	Ser	Ser	Gly	Leu	Cys	Tyr	Gly	Gly	Gly	Val	Gly
	50					55					60				
Asp	Asn	Asn	Asn	Gly	Gly	Tyr	Leu	His	Ser	Pro	Leu	Ser	Val	Met	Pro
65					70					75					80

Leu Lys Ser Asp Gly Ser Leu Cys Ile Met Glu Ala Leu Thr Arg Ser
 85 90 95
 Arg Pro Gln Gly Leu Gly Gln Gly Ser Thr Pro Lys Leu Glu Asp Phe
 100 105 110
 Leu Gly Gly Ala Ser Ala Thr Val Thr Ala Thr Thr Met Pro Leu Ser
 115 120 125
 Leu Asp Ser Leu Tyr Ser Tyr Gln Gln Ser Ala Asp Pro Glu Lys Gln
 130 135 140
 Ser
 145

<210> 795
 <211> 220
 <212> PRT
 <213> Eucalyptus grandis

<400> 795
 Glu Thr Gln Arg Glu Lys Val Glu Arg Glu Arg Glu Thr Ser Ile Pro
 1 5 10 15
 Ser Gln Ser Pro Gln Pro Thr Ile Leu Pro Pro Thr Ala Ser Ser Pro
 20 25 30
 Gly Arg Ser Asp Pro Pro Gly Asp Ala Thr Thr Met Val Lys Pro Ser
 35 40 45
 Gly Gly Gly Gly Asp Arg Ala Pro Pro Leu Ala Pro Phe Leu Ser Lys
 50 55 60
 Cys Tyr Glu Met Val Glu Asp Glu Ala Thr Asp Pro Ile Ile Ala Trp
 65 70 75 80
 Gly Ser Ala Gly Asp Thr Phe Val Ile Trp Asp Ile Thr Gln Phe Thr
 85 90 95
 Leu Gln Leu Leu Pro His Tyr Phe Lys His Ser Asn Phe Ser Ser Phe
 100 105 110
 Met Arg Gln Leu Asn Ile Tyr Gly Phe Arg Lys Val Asp Ser Asp Arg
 115 120 125
 Trp Glu Phe Ala Asn Asp Gly Phe Ile Arg Gly Gln Lys His Met Leu
 130 135 140
 Lys Asn Ile Arg Arg Arg Lys Asn Val Gln Val Val Asp Gln Lys Lys
 145 150 155 160
 Ser Leu Gln Lys Gln Asp Asn Ser Val Glu Glu Val Asp Lys Ile Lys
 165 170 175
 Ile Asp Gly Leu Trp Lys Glu Val Glu Asn Leu Lys Ile Asp Lys Thr
 180 185 190
 Val Leu Ser Leu Glu Leu Gly Lys Val Arg Gln Leu Gln Glu Thr Ser
 195 200 205
 Asp Asn Lys Leu Val Leu Leu Arg Asp Arg Val Gln
 210 215 220

<210> 796
 <211> 212
 <212> PRT
 <213> Eucalyptus grandis

<400> 796
 Met Ile Gly Ala Ala Thr Asn Gln Ile Pro Pro Pro Pro Pro Pro Pro
 1 5 10 15
 Gln Pro Gln Gln Ala Ala Pro Ala Ala Ala Ala Ile Arg Phe Pro Asp
 20 25 30
 Ser Val Tyr Asn Ala Leu Arg Val Gly Ala Val Phe Gln Arg Leu Ser

210	215	220
Trp Ile Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys Val Leu Met Pro		
225	230	235
Gln Leu Asp Pro Leu Ser Asp Gln Gln Trp Ala Phe Val Ser Asn Leu		
	245	250
Arg Gln Ala Cys Gln Gln Ala Glu Asp Ala Leu Lys Gln		255
260	265	

<210> 798
 <211> 145
 <212> PRT
 <213> Eucalyptus grandis

<400> 798

Ile Asn Thr Thr Pro Gln Phe Leu Ser Leu Arg Ser His Pro Asn Arg	
1 5 10 15	
His Pro Gln Ser Leu Ser Phe Ser Leu Phe Phe Ser Val Cys Pro Val	
20 25 30	
Cys Asp Lys Gly Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala	
35 40 45	
Ser His Arg Lys His Ala Ser Ser Ala Ala Ala Ala Gly Gly Asp	
50 55 60	
Asp Gln Pro Thr Thr Ser Ser Thr Ser Ala Ala Thr Thr Ser Ser Gly	
65 70 75 80	
Val Ser Gly Lys Val His Glu Cys Ser Ile Cys His Lys Ser Phe Pro	
85 90 95	
Thr Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu Ala Pro	
100 105 110	
Ala Pro Ile Pro Ala Ser Phe Ser Ala Pro Ser Ala Ala Ala Pro	
115 120 125	
Ala Ala Ser Gly Val Ser Val Ser Glu Gly Val Gly Ser Thr His Thr	
130 135 140	
Gln	
145	

<210> 799
 <211> 121
 <212> PRT
 <213> Eucalyptus grandis

<400> 799

Arg His His Lys Ile Gln Gln Leu Gln Arg Ala Arg Ser Glu Leu Ala	
1 5 10 15	
Arg Met Phe Ser Leu Glu Gly Gln Leu Glu Asp Pro Val Arg Ser Gly	
20 25 30	
Trp Gln Leu Val Phe Val Asp Arg Glu Asn Asp Ser Leu Leu Gly	
35 40 45	
Asp Gly Pro Trp Pro Glu Phe Val Asn Ser Val Trp Cys Ile Lys Ile	
50 55 60	
Leu Ser Pro Gln Glu Val Gln Gln Met Gly Lys Gln Asp Leu Glu Leu	
65 70 75 80	
Leu Asn Ser Ile Pro Val Gln Arg His Ser Asn Gly Gly Cys Asp Glu	
85 90 95	
Phe Thr Asn Arg Gln Asp Ser Arg Thr Ile Asn Ser Gly Ile Pro Ser	
100 105 110	
Val Gly Ser Leu Asp Tyr Gly Thr Leu	
115 120	

<210> 800
 <211> 182
 <212> PRT
 <213> Eucalyptus grandis

<400> 800
 Thr Asp Asp Thr Gly Asp Lys Asn His Arg Phe Glu Gly Gly Gln Leu
 1 5 10 15
 Gly Val Ala Ala Ala Ser Asp Ser Ser Asp Arg Ser Lys Glu Lys Ala
 20 25 30
 Thr Asp Gln Lys Thr Leu Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala
 35 40 45
 Arg Lys Ser Arg Leu Arg Lys Lys Ala Tyr Val Gln Gln Leu Glu Ser
 50 55 60
 Ser Arg Leu Lys Leu Thr Gln Leu Glu Gln Glu Leu Gln Arg Ala Arg
 65 70 75 80
 Gln Gln Gly Ile Phe Ile Ser Gly Ser Gly Glu Gln Ser His Ser Met
 85 90 95
 Ser Gly Asn Gly Ala Leu Ala Phe Asp Val Glu Tyr Ala Arg Trp Leu
 100 105 110
 Glu Glu His Asn Lys Val Val Asn Glu Leu Arg Asn Ala Val Asn Ala
 115 120 125
 His Ala Gly Asp Thr Glu Leu Arg Thr Ile Val Asp Asn Val Ala Ala
 130 135 140
 His Phe Asp Glu Ile Phe Lys Leu Lys Gly Thr Ala Ala Lys Ala Asp
 145 150 155 160
 Val Phe His Ile Leu Ser Gly Met Trp Lys Thr Pro Ala Glu Arg Cys
 165 170 175
 Phe Met Trp Ile Gly Gly
 180

<210> 801
 <211> 74
 <212> PRT
 <213> Eucalyptus grandis

<400> 801
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys
 20 25 30
 Ser Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Leu Ser Ser
 35 40 45
 Tyr Ser Ser Met Glu Gly Val Leu Tyr Cys Lys Pro His Phe Glu Gln
 50 55 60
 Leu Phe Lys Glu Thr Gly Asn Phe Asn Lys
 65 70

<210> 802
 <211> 194
 <212> PRT
 <213> Eucalyptus grandis

<400> 802
 Lys Ser Val Phe His Val Phe Tyr Ser Pro Arg Ala Ser His Ala Glu
 1 5 10 15

Phe	Val	Val	Pro	Tyr	Gln	Lys	Tyr	Leu	Lys	Ser	Ile	Asn	Asn	Val	Ile
			20					25					30		
Cys	Ile	Gly	Thr	Arg	Phe	Lys	Met	Arg	Val	Asp	Val	Asp	Asp	Ala	Pro
		35					40					45			
Glu	Lys	Arg	Cys	Thr	Gly	Val	Val	Thr	Arg	Ile	Gly	Asp	Leu	Asp	Pro
	50				55						60				
Tyr	Arg	Trp	Pro	Asn	Ser	Lys	Trp	Arg	Cys	Leu	Met	Val	Gln	Trp	Asp
65					70				75					80	
Asp	Asp	Ile	Thr	Asn	Gly	His	Gln	Asp	Arg	Val	Ser	Pro	Trp	Glu	Ile
				85				90						95	
Asp	Pro	Ser	Val	Ser	His	Ser	Pro	Leu	Ser	Ile	Gln	Ser	Ser	Pro	Arg
			100					105					110		
Leu	Lys	Arg	Pro	Arg	Thr	Ser	Leu	Pro	Thr	Met	Pro	Pro	Val	Pro	Gly
		115					120					125			
Gly	Gly	Val	Arg	Leu	Leu	Asp	Phe	Glu	Glu	Ser	Leu	Arg	Ser	Ser	Lys
	130					135					140				
Val	Leu	Gln	Gly	Gln	Glu	Lys	Leu	His	Leu	Val	Ser	Pro	Val	Tyr	Gly
145					150					155					160
Arg	Asp	Thr	Leu	Asn	Cys	Gln	Val	Asp	Phe	Glu	Gln	Ser	Pro	Ala	His
				165				170						175	
Gln	Gly	Leu	Ala	Ser	Val	Val	Ser	Lys	Lys	Arg	Pro	Thr	Ile	Ser	Met
			180					185					190		
Ser	Thr														

<210> 803

<211> 282

<212> PRT

<213> Eucalyptus grandis

<400> 803

Arg	Arg	Ala	Asn	Arg	Pro	Gln	Thr	Val	Met	Pro	Ser	Ser	Val	Leu	Ser
1				5					10					15	
Ser	Asp	Ser	Met	His	Ile	Gly	Leu	Leu	Ala	Ala	Ala	Ala	His	Ala	Ala
			20					25					30		
Ala	Thr	Asn	Ser	Arg	Phe	Thr	Ile	Phe	Tyr	Asn	Pro	Arg	Ala	Ser	Pro
		35				40						45			
Ser	Glu	Phe	Val	Ile	Pro	Leu	Ala	Lys	Tyr	Val	Lys	Ala	Val	Tyr	His
	50				55						60				
Thr	Arg	Val	Ser	Val	Gly	Met	Arg	Phe	Arg	Met	Leu	Phe	Glu	Thr	Glu
65					70				75					80	
Glu	Ser	Ser	Val	Arg	Arg	Tyr	Met	Gly	Thr	Ile	Thr	Gly	Ile	Ser	Asp
				85				90						95	
Leu	Asp	Pro	Val	Arg	Trp	Gln	Asn	Ser	His	Trp	Arg	Ser	Val	Lys	Val
			100					105					110		
Gly	Trp	Asp	Glu	Ser	Thr	Ala	Gly	Glu	Arg	Gln	Pro	Arg	Val	Ser	Leu
		115					120					125			
Trp	Glu	Ile	Glu	Pro	Leu	Thr	Thr	Phe	Pro	Met	Tyr	Pro	Ser	Pro	Phe
	130					135					140				
Pro	Leu	Arg	Leu	Lys	Arg	Pro	Trp	Pro	Ser	Gly	Leu	Pro	Ser	Phe	His
145				150						155					160
Ala	Leu	Arg	Asp	Gly	Asp	Met	Ser	Ile	Ser	Ser	Ser	Leu	Met	Trp	Leu
				165				170						175	
Gln	Gly	Val	Gly	Asp	Gln	Gly	Val	Gln	Ser	Leu	Asn	Phe	Gln	Gly	Phe
			180					185					190		
Gly	Met	Thr	Pro	Trp	Leu	Gln	Pro	Arg	Tyr	Asp	Thr	Ser	Met	Ala	Ala
		195					200						205		

Leu	Gln	Thr	Asp	Val	Tyr	Gln	Ala	Met	Ala	Ser	Ala	Ala	Leu	Gln	Asp
210						215					220				
Met	Arg	Ala	Val	Asp	Pro	Ser	Lys	Cys	Ala	Ser	Gln	Ser	Leu	Leu	Pro
225					230					235					240
Leu	Gln	Gln	Ser	Gln	Asn	Val	Pro	Met	Gly	Gln	Ala	Ser	Ile	Ile	Gln
				245					250					255	
Arg	Gln	Met	Leu	Gln	Gln	Ser	Gln	Ser	Gln	Asn	Ser	Leu	Leu	Gln	Gly
			260					265					270		
Phe	Gln	Glu	Asn	Gln	Ala	Lys	Pro	Lys	Gly						
	275						280								

<210> 804

<211> 177

<212> PRT

<213> Eucalyptus grandis

<400> 804

Asp	Lys	Leu	Arg	Glu	Ile	Glu	Asn	Ser	Leu	Phe	Gly	Pro	Glu	Ser	Asp
1				5					10					15	
Ile	Ser	Asp	Ser	Cys	Asn	Cys	Cys	Leu	Asn	Ser	Gly	Ser	His	Gln	Phe
			20					25					30		
Pro	Ser	Thr	Gly	Gln	Trp	Asn	Val	Asn	Gln	Met	Ile	Glu	Met	Ile	Pro
		35					40					45			
Lys	Leu	Asp	Leu	Lys	Asp	Met	Leu	Ile	Val	Cys	Ala	Gln	Ala	Val	Ala
	50					55					60				
Glu	Ala	Asp	Met	Pro	Arg	Thr	Ala	Ala	Leu	Met	Glu	Val	Leu	Glu	Arg
65					70					75					80
Met	Val	Ser	Val	Ser	Gly	Asp	Pro	Ile	Gln	Arg	Leu	Gly	Ala	Tyr	Leu
				85				90						95	
Leu	Glu	Gly	Leu	Arg	Ala	Arg	Leu	Glu	Ser	Ser	Gly	Ser	Ile	Ile	Tyr
			100					105					110		
Arg	Lys	Leu	Lys	Cys	Lys	Glu	Pro	Thr	Gly	Ser	Glu	Leu	Met	Ser	Tyr
			115				120					125			
Met	Ser	Ile	Leu	Tyr	Gln	Ile	Cys	Pro	Tyr	Trp	Lys	Phe	Ala	Tyr	Glu
	130					135					140				
Ser	Ala	Asn	Val	Val	Ile	Gly	Glu	Ala	Ile	Lys	Tyr	Glu	Ser	Arg	Ile
145					150					155					160
His	Ile	Ile	Asp	Phe	Gln	Ile	Ala	Gln	Gly	Ser	Gln	Trp	Ile	Pro	Ile
				165					170					175	
Ile															

<210> 805

<211> 86

<212> PRT

<213> Eucalyptus grandis

<400> 805

Met	Gly	Arg	Ser	Pro	Arg	Cys	Asp	Lys	Asp	Gly	Leu	Asn	Lys	Gly	Ala
1				5					10					15	
Trp	Thr	Ala	Ala	Glu	Asp	Gln	Ile	Leu	Met	Asp	Tyr	Val	Lys	Leu	His
			20					25					30		
Gly	Glu	Gly	Lys	Trp	Ser	Arg	Leu	Ser	Arg	Glu	Thr	Gly	Leu	Arg	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Met	Asn	Tyr	Leu	Arg	Pro	Asp
	50					55				60					
Ile	Lys	Arg	Gly	Asn	Ile	Ser	Pro	Asp	Glu	Glu	Glu	Leu	Ile	Ile	Arg

[illegible]

<400> 806

<210> 807

<211> 222

<212> PRT

<213> Eucalyptus grandis

<400> 807

Val	Gln	Asn	Pro	Asp	Ser	Val	Ala	Leu	Leu	Arg	Lys	Gln	Gly	Ile	Asp
			180					185					190		
Phe	Glu	Met	Asn	Arg	Gln	Lys	Gly	Ala	Asp	Ser	Ala	Arg	Phe	Gly	Glu
		195					200					205			
Leu	Leu	Met	Ser	Ser	Gly	Leu	Val	Cys	Asn	Asp	Glu	Val	Ser		
	210					215					220				

<210> 808
 <211> 111
 <212> PRT
 <213> Eucalyptus grandis

<400> 808															
Arg	Gly	Gly	Phe	Asn	Met	Glu	Lys	Leu	Ala	Arg	Gly	Ser	Val	Gln	Glu
1				5					10					15	
Glu	His	Leu	Asn	Ala	Ala	Val	Ala	Leu	Asp	Glu	Gly	Trp	Tyr	Cys	Thr
			20					25					30		
Pro	Arg	Met	Leu	His	Phe	Ser	Phe	Glu	Asn	Glu	Phe	Lys	Arg	Asp	Gly
		35					40					45			
Ala	Gly	Arg	Gly	Asn	Trp	Gly	Thr	Pro	Thr	Asp	Glu	Ile	Ala	Pro	Glu
	50					55					60				
Pro	Glu	Glu	Pro	Val	Val	Glu	Val	Glu	Lys	Asn	Val	Gly	Ser	Glu	Lys
65					70					75					80
Gln	Leu	Val	Asp	Glu	Glu	Ala	Ala	Asp	Ala	Ser	Lys	Glu	Asn	Pro	Leu
			85					90						95	
Asn	Glu	Pro	Glu	Glu	Lys	Glu	Pro	Glu	Asp	Lys	Glu	Met	Thr	Leu	
			100					105					110		

<210> 809
 <211> 159
 <212> PRT
 <213> Eucalyptus grandis

<400> 809															
Gln	Ser	Gly	Leu	Pro	Leu	Asp	Asp	Arg	Pro	Glu	Gly	Ala	Arg	Ser	Pro
1				5					10					15	
Ser	Pro	Glu	Pro	Ile	Tyr	Asp	Asn	Met	Gly	Ile	Arg	Ile	Asn	Thr	Arg
			20					25					30		
Glu	Tyr	Arg	Ala	Arg	Glu	Arg	Leu	Asn	Lys	Glu	Arg	Gln	Asp	Ile	Ile
		35					40					45			
Thr	Gln	Ile	Ile	Lys	Arg	Asn	Pro	Ala	Phe	Lys	Pro	Pro	Ala	Asp	Tyr
	50					55					60				
Arg	Pro	Pro	Lys	Leu	Gln	Lys	Lys	Leu	Tyr	Ile	Pro	Met	Lys	Glu	Tyr
65					70					75					80
Pro	Gly	Tyr	Asn	Phe	Ile	Gly	Leu	Ile	Ile	Gly	Pro	Arg	Gly	Asn	Thr
			85					90						95	
Gln	Lys	Arg	Met	Glu	Arg	Glu	Thr	Gly	Ala	Lys	Ile	Val	Ile	Arg	Gly
			100					105					110		
Lys	Gly	Ser	Val	Lys	Glu	Gly	Arg	Leu	Gln	Gln	Lys	Arg	Asp	Leu	Lys
		115					120					125			
Pro	Asp	Pro	Ala	Glu	Asn	Glu	Asp	Leu	His	Val	Leu	Val	Glu	Ala	Glu
	130						135					140			
Thr	Gln	Glu	Ala	Leu	Asp	Ala	Ala	Ala	Gly	Met	Val	Glu	Lys	Leu	
145						150				155					

<210> 810
 <211> 387

<212> PRT
 <213> Eucalyptus grandis

<400> 810

Met	Cys	Gly	Gly	Ala	Ile	Ile	Ser	Asp	Phe	Ile	Pro	Asn	Gln	Arg	Ala
1				5					10					15	
Arg	Arg	Leu	Thr	Ser	Asp	Phe	Leu	Trp	Pro	Asp	Leu	Lys	Arg	Ser	Ala
			20					25					30		
Gly	Lys	Gln	Ser	Arg	Arg	Pro	Ala	Arg	Ser	Glu	Val	Val	Asp	Val	Val
		35					40					45			
Asp	Asp	Asp	Phe	Glu	Ala	Asp	Phe	Gln	Gly	Phe	Lys	Asp	Glu	Ser	Asp
	50					55					60				
Val	Glu	Asp	Asp	Phe	Asp	Asp	Glu	Val	Glu	Val	Asp	Val	Lys	Pro	Phe
65					70					75					80
Ala	Phe	Ser	Ala	Ala	Glu	Pro	Arg	Tyr	Ser	Lys	Gly	Ser	Ser	Thr	Thr
				85					90					95	
Lys	Ser	Val	Glu	Tyr	Asn	Gly	Gln	Ala	Glu	Lys	Ser	Ala	Lys	Arg	Lys
			100					105					110		
Arg	Lys	Asn	Gln	Tyr	Arg	Gly	Ile	Arg	Gln	Arg	Pro	Trp	Gly	Lys	Trp
		115					120					125			
Ala	Ala	Glu	Ile	Arg	Asp	Pro	Arg	Lys	Gly	Val	Arg	Val	Trp	Leu	Gly
		130					135					140			
Thr	Phe	Asn	Thr	Ala	Glu	Glu	Ala	Ala	Arg	Ala	Tyr	Asp	Ala	Glu	Ala
145					150					155					160
Arg	Arg	Ile	Arg	Gly	Lys	Lys	Ala	Lys	Val	Asn	Phe	Pro	Asp	Asp	Ser
				165					170					175	
Ser	Ser	Ala	Ser	Ser	Lys	Arg	Ser	Val	Lys	Ser	Asn	Val	Gln	Lys	Leu
			180					185					190		
Pro	Lys	Thr	Thr	Asn	Asn	Val	Gln	Pro	Asn	Leu	Asn	Gln	Asn	Phe	
		195				200						205			
Asn	Tyr	Ala	Asn	Ser	Ser	Asp	Asp	Ile	Tyr	Ser	Ser	Met	Gly	Phe	
	210					215				220					
Val	Glu	Glu	Lys	Pro	Pro	Thr	Asn	Gln	Phe	Tyr	Met	Asp	Ala	Leu	Asn
					230					235					240
Ala	Gln	Gly	Val	Ser	Gly	Met	Asn	Ser	Leu	Ser	Pro	Ala	Asp	Asn	Ala
				245					250					255	
Pro	Leu	Tyr	Phe	Asn	Ser	Asp	Gln	Gly	Ser	Asn	Ser	Phe	Glu	Cys	Ser
			260					265					270		
Asp	Phe	Gly	Trp	Gly	Glu	Asn	Ala	Pro	Arg	Thr	Pro	Asp	Val	Ser	Ser
		275					280					285			
Val	Leu	Ser	Ala	Thr	Leu	Glu	Val	Asp	Glu	Ser	Gln	Phe	Glu	Asp	Ala
	290					295					300				
Asn	Pro	Arg	Lys	Lys	Ile	Arg	Ser	Ala	Ser	Asp	Asp	Val	Ser	Glu	Glu
305					310					315					320
Glu	Asn	Thr	Ala	Ala	Lys	Thr	Phe	Ser	Glu	Glu	Leu	Ser	Ala	Phe	Glu
				325					330					335	
Ser	Asp	Met	Lys	Phe	Phe	Gln	Met	Pro	Phe	Val	Asp	Gly	Gly	Trp	Asp
			340					345					350		
Pro	Ser	Val	Glu	Ala	Leu	Leu	Gly	Gly	Glu	Ala	Thr	Gln	Asp	Gly	Gly
		355					360					365			
Asn	Ala	Val	Asp	Leu	Trp	Ser	Phe	Asp	Asp	Leu	Ala	Pro	Met	Met	Gly
	370					375					380				
Gly	Val	Phe													
385															

<210> 811
 <211> 219

<212> PRT
 <213> Eucalyptus grandis

<400> 811

His	Gly	Gly	Ala	Ala	Gly	Phe	Leu	Gly	Pro	Arg	Ala	Val	Pro	Met	Lys
1				5				10					15		
Gln	Ala	Gly	Leu	Ala	Gln	Lys	Pro	Thr	Lys	Leu	Tyr	Arg	Gly	Val	Arg
			20					25					30		
Gln	Arg	His	Trp	Gly	Lys	Trp	Val	Ala	Glu	Ile	Arg	Leu	Pro	Lys	Asn
		35				40						45			
Arg	Thr	Arg	Leu	Trp	Leu	Gly	Thr	Phe	Asp	Thr	Ala	Glu	Glu	Ala	Ala
	50				55						60				
Leu	Ala	Tyr	Asp	Lys	Ala	Ala	Tyr	Arg	Leu	Arg	Gly	Asp	Phe	Ala	Arg
65				70					75					80	
Leu	Asn	Phe	Pro	His	Leu	Lys	His	Lys	Gly	Ser	His	Ile	Gln	Gly	Asp
				85				90					95		
Phe	Gly	Asp	Tyr	Lys	Pro	Leu	His	Ser	Ser	Val	Asp	Ala	Lys	Leu	Gln
			100					105					110		
Ala	Ile	Cys	Gln	Asp	Met	Ala	Glu	Lys	Pro	Ala	Asp	Gly	Lys	Lys	Arg
		115					120					125			
Arg	Ser	Ala	Pro	Ala	Gly	Gly	Gly	Ser	Ser	Ala	Ala	Ala	Ala	Ser	Pro
	130					135					140				
Arg	Arg	Pro	Glu	Pro	Glu	Pro	Glu	Pro	Val	Lys	Thr	Glu	Val	Gly	Val
145					150					155				160	
Ser	Ala	Ala	Thr	Ser	Ser	Ser	Pro	Glu	Ser	Asp	Asp	Ala	Ser	Val	Glu
				165				170					175		
Glu	Ser	Ser	Pro	Leu	Ser	Glu	Leu	Thr	Phe	Asn	Asp	Phe	Val	Glu	Pro
			180					185					190		
Gln	Trp	Glu	Ser	Val	Gly	Val	Pro	Glu	Asn	Phe	Ser	Leu	Gln	Lys	Tyr
	195						200					205			
Pro	Ser	Glu	Ile	Asp	Trp	Ala	Ala	Ile	Tyr	Ser					
	210					215									

<210> 812
 <211> 75
 <212> PRT
 <213> Eucalyptus grandis

<400> 812

Met	Lys	Glu	Arg	Gln	Arg	Trp	Arg	Ala	Glu	Glu	Asp	Ala	Leu	Leu	Arg
1				5				10					15		
Ala	Tyr	Val	Lys	Gln	Tyr	Gly	Pro	Arg	Glu	Trp	His	Leu	Val	Ser	Gln
			20					25				30			
Arg	Met	Asn	Thr	Pro	Leu	Asn	Arg	Asp	Ala	Lys	Ser	Cys	Leu	Glu	Arg
		35				40						45			
Trp	Lys	Asn	Tyr	Leu	Lys	Pro	Gly	Ile	Lys	Lys	Gly	Ser	Leu	Ser	Glu
	50				55						60				
Glu	Glu	Gln	Arg	Leu	Val	Phe	His	Leu	Leu	Pro					
65				70					75						

<210> 813
 <211> 235
 <212> PRT
 <213> Eucalyptus grandis

<400> 813

Val	Val	Leu	Pro	Ser	Ser	Gly	Met	Val	Lys	Ser	Ser	Gly	Gly	Ala	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Met	Glu	Ser	Glu	Arg	Tyr	Asp	Glu	Thr	Thr	Glu	Lys	Gln	Arg	Ile	Arg
1				5				10						15	
Arg	Arg	Pro	His	Gln	Lys	Pro	Tyr	Arg	Gly	Ile	Arg	Met	Arg	Lys	Trp
			20					25					30		
Gly	Lys	Trp	Val	Ala	Glu	Ile	Arg	Glu	Pro	Asn	Lys	Arg	Ser	Arg	Ile
		35					40					45			
Trp	Leu	Gly	Ser	Tyr	Ala	Thr	Ala	Val	Ala	Ala	Ala	Arg	Ala	Tyr	Asp
		50				55					60				
Thr	Ala	Val	Phe	Tyr	Leu	Arg	Gly	Pro	Ser	Ala	Arg	Leu	Asn	Phe	Pro
65					70					75					80
Asp	Leu	Ile	Leu	His	Glu	Gly	Gln	Asp	Ser	Leu	Gly	Glu	Val	Ser	Ala
				85				90						95	
Ala	Ser	Ile	Arg	Arg	Arg	Ala	Ala	Glu	Val	Gly					
			100					105							

<210> 816
 <211> 89
 <212> PRT
 <213> Eucalyptus grandis

Met	Ala	Phe	Thr	Gly	Thr	Val	Asp	Lys	Cys	Lys	Val	Cys	Asp	Lys	Thr
1				5				10						15	
Val	His	Val	Val	Asp	Met	Met	Thr	Leu	Glu	Gly	Ile	Pro	Tyr	His	Lys
			20				25						30		
Thr	Cys	Phe	Arg	Cys	Ser	His	Cys	Asn	Gly	Thr	Leu	Val	Met	Ser	Asn
		35					40					45			
Tyr	Ser	Ser	Met	Asp	Gly	Val	Leu	Tyr	Cys	Lys	Thr	His	Phe	Glu	Gln
		50				55					60				
Leu	Phe	Lys	Glu	Ser	Gly	Asp	Phe	Arg	Lys	Asn	Phe	His	Ser	Ala	Lys
65					70					75					80
Ser	Asp	Lys	Pro	Asn	Glu	Met	Thr	Arg							
				85											

<210> 817
 <211> 96
 <212> PRT
 <213> Eucalyptus grandis

Met	Glu	Ser	Glu	Arg	Tyr	Asp	Glu	Thr	Thr	Glu	Gly	Gln	Arg	Ile	Lys
1				5				10						15	
Arg	Arg	Pro	His	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Arg	Arg	Gln	Lys
			20				25						30		
Pro	Tyr	Arg	Gly	Ile	Arg	Met	Arg	Lys	Trp	Gly	Lys	Trp	Val	Ala	Glu
		35					40					45			
Ile	Arg	Glu	Pro	Asn	Lys	Arg	Ser	Arg	Ile	Trp	Leu	Gly	Ser	Tyr	Ala
		50				55					60				
Thr	Pro	Val	Ala	Ala	Ala	Arg	Ala	Tyr	Asp	Thr	Ala	Val	Phe	Tyr	Leu
65					70					75					80
Arg	Gly	Pro	Ser	Ala	Arg	Leu	Asn	Phe	Pro	Asp	Leu	Ile	Trp	Arg	Glu
				85					90					95	

<210> 818
 <211> 159
 <212> PRT
 <213> Eucalyptus grandis

Trp Arg Ser Leu Lys Val Arg Trp Asp Glu Asn Ser Ala Ile Pro Arg
 225 230 235 240
 Pro

<210> 820
 <211> 185
 <212> PRT
 <213> Eucalyptus grandis

<400> 820
 Phe Arg Gly Val Arg Lys Arg Lys Trp Gly Arg Trp Val Ser Glu Ile
 1 5 10 15
 Arg Leu Pro Asn Ser Arg Glu Arg Ile Trp Leu Gly Ser Tyr Asp Thr
 20 25 30
 Pro Glu Lys Ala Ala Arg Ala Phe Asp Ala Ala Ala Phe Cys Leu Gly
 35 40 45
 Arg Pro Ala Ala Lys Leu Asn Phe Pro Gly Ser Pro Pro Glu Ile Ser
 50 55 60
 Gly Ala Ala Ser Leu Ser Pro Asp Glu Ile Gln Ser Ala Ala Ala Ser
 65 70 75 80
 His Ala Asn Phe Gly Ala Val Ala Val Pro Ala Arg Ala Glu Leu Pro
 85 90 95
 Arg Pro Gly Ser Pro Ala Pro Ser Pro Ser Leu Ser Ala Ser Glu Ala
 100 105 110
 Ser Ser Val Leu Thr Thr Glu Ser Asp Leu Thr Leu Asp Leu Ser Phe
 115 120 125
 Leu Asp Phe Leu Asp Asp Ser Gly Pro Val Ser Gly Glu Pro His Ile
 130 135 140
 Gly Lys Phe Pro Gly Val Glu Glu Ala Pro Asp Val Phe Tyr His Met
 145 150 155 160
 Gln Phe Pro Ser Val Glu Ser Ala Gly Leu Asn Leu Asp Thr Leu Leu
 165 170 175
 Ala Ser Asp Ser Phe Pro Trp Arg Ile
 180 185

<210> 821
 <211> 187
 <212> PRT
 <213> Eucalyptus grandis

<400> 821
 Glu Ala Asp Phe Leu Ala Lys His Ser Lys Pro Glu Ile Val Asp Met
 1 5 10 15
 Leu Arg Lys His Thr Tyr Arg Asp Glu Leu Glu Gln Ser Lys Arg Ser
 20 25 30
 Tyr Arg Gly Ser Ala Ala Glu Arg Ala Gly Arg Gly Gly Phe Gly Pro
 35 40 45
 Gly Arg Thr Glu Trp Ser Ala Ala Ala Arg Glu Gln Leu Phe Glu Lys
 50 55 60
 Ala Val Thr Pro Ser Asp Val Gly Lys Leu Asn Arg Leu Val Ile Pro
 65 70 75 80
 Lys Gln His Ala Glu Lys His Phe Pro Leu Pro Gly Gly Pro Ala Ala
 85 90 95
 Thr Met Lys Gly Val Leu Leu Asn Phe Glu Asp Val Gly Gly Lys Val
 100 105 110
 Trp Arg Phe Arg Tyr Ser Tyr Trp Asn Ser Ser Gln Ser Tyr Val Leu

Val	Thr	Thr	Arg	Thr	Pro	Thr	Gln	Val	Ala	Ser	His	Ala	Gln	Lys	Tyr
				165					170					175	
Tyr	Ile	Arg	Gln	Ser	Asn	Ala	Gly	Arg	Arg	Lys	Arg	Arg	Ser	Ser	Leu
			180					185					190		
Phe	Asp	Met	Ala	Pro	Asp	Met	Ala	Thr	Ala	Asp	Gln	Pro	Ser	His	Pro
		195					200					205			
Glu	Glu	Thr	Phe	Leu	Pro	Pro	Leu	Val	Arg	Leu	Asn	Asp	Asp	Thr	Asn
	210					215					220				
Ser	Thr	Thr	Ser	Thr	Ser	Met	Gly	Leu	Asp	Leu	Glu	Arg	Thr	Pro	Met
225					230					235					240
Glu	Thr	Ser	His	Pro	Glu	Thr	Ser	Glu	Gly	Gly	Gly	Asp	Val	Ala	Met
			245						250					255	
Glu	Ser	Ile	Asp	Gln	Val	Pro	Leu	Val	Pro	Cys	Tyr	Phe	Pro	Tyr	Tyr
			260					265					270		
Leu	Pro	Leu	Pro	Phe	Pro	Met	Trp	Pro	Pro	Asn	Met	Ala	Pro	Pro	Glu
		275					280					285			
Asp	Gly	Arg	Val	Val	Glu	Thr	Ser	His	His	Arg	Val	Leu	Lys	Pro	Ile
	290					295					300				
Pro	Val	Ile	Pro	Lys	Glu	Pro	Leu	Asn	Ile	Asp	Gln	Ile	Val	Gly	Met
305					310					315					320
Ser	Gln	Leu	Ser	Leu	Ala	Glu	Asn	Glu	Pro	Ala	Pro	Leu	Ser	Leu	Lys
				325					330					335	
Phe	Leu	Gly	Glu	Thr	Ser	Arg	Gln	Ser	Ala	Phe	Ile	Lys	Ala	Pro	Ser
			340				345						350		
Ser	Val	Asn	Glu	Ser	Asp	Leu	Asp	Asn	Cys	Lys	Asp	Gly	Ala	Thr	Gln
		355					360					365			
Ala	Ala														
	370														

<210> 824

<211> 160

<212> PRT

<213> Eucalyptus grandis

<400> 824

Glu	Leu	Trp	Leu	Ser	Phe	Gly	Thr	Gly	Glu	Lys	Lys	Ser	Ile	Asn	Ser
1				5					10					15	
Glu	Leu	Trp	His	Ala	Cys	Ala	Gly	Pro	Leu	Val	Ser	Leu	Pro	Pro	Val
			20					25					30		
Gly	Ser	Leu	Val	Val	Tyr	Phe	Pro	Gln	Gly	His	Ser	Glu	Gln	Val	Ala
		35				40						45			
Ala	Ser	Met	Gln	Lys	Glu	Thr	Cys	Val	Pro	Ser	Tyr	Pro	Asn	Leu	
	50				55					60					
Pro	Ala	Lys	Leu	Ile	Cys	Met	Leu	His	Asn	Val	Thr	Leu	His	Ala	Asp
65				70					75					80	
Leu	Glu	Thr	Asp	Glu	Val	Tyr	Ala	Gln	Met	Thr	Leu	Gln	Pro	Val	Ser
			85					90					95		
Lys	Tyr	Asp	Gln	Glu	Ala	Leu	Leu	Ala	Ser	Asp	Met	Gly	Leu	Lys	Gln
			100					105					110		
Ser	Arg	Gln	Pro	Thr	Glu	Phe	Phe	Cys	Lys	Thr	Leu	Thr	Ala	Ser	Asp
		115				120						125			
Thr	Ser	Thr	His	Gly	Gly	Phe	Ser	Val	Pro	Arg	Arg	Ala	Ala	Glu	Lys
	130				135						140				
Ile	Phe	Pro	Ser	Leu	Asp	Phe	Thr	Met	Gln	Pro	Pro	Cys	Gln	Glu	Leu
145					150					155					160

<210> 825

<211> 129
 <212> PRT
 <213> Eucalyptus grandis

<400> 825

Met	Ala	Leu	Glu	Ala	Leu	Asn	Ser	Pro	Thr	Ala	Ala	Ala	Pro	Phe	Gly
1				5					10					15	
His	Asp	Asp	Ala	Asp	Gly	His	Pro	Trp	Ala	Lys	Arg	Lys	Arg	Ser	Lys
			20					25					30		
Arg	Pro	Arg	Ala	Asp	Pro	Gln	Asp	Gln	Pro	Ser	Glu	Glu	Glu	Tyr	Leu
		35				40						45			
Ala	Leu	Cys	Leu	Ile	Met	Leu	Ala	Arg	Arg	Arg	Arg	Arg	Pro	Gly	Ser
	50					55					60				
Ser	Gly	Arg	Leu	His	Glu	Cys	Ser	Ile	Cys	His	Lys	Ala	Phe	Pro	Thr
65					70					75					80
Gly	Gln	Ala	Leu	Gly	Gly	His	Lys	Arg	Cys	His	Tyr	Asp	Gly	Gly	Ser
				85					90					95	
Ser	Ser	Ser	Ala	Ala	Arg	Ala	Ala	Ser	Ser	Ser	Glu	Ala	Gly	Gly	Pro
			100					105					110		
Ser	His	Thr	Thr	Val	Ser	His	Arg	Glu	Pro	Ile	Asp	Leu	Asn	Leu	Pro
		115					120					125			

Ala

<210> 826
 <211> 115
 <212> PRT
 <213> Eucalyptus grandis

<400> 826

Arg	His	Leu	Leu	Gln	Ser	Gly	Trp	Ser	Leu	Phe	Val	Ser	Ser	Lys	Lys
1				5					10					15	
Leu	Val	Ala	Gly	Asp	Ala	Phe	Ile	Tyr	Leu	Arg	Gly	Glu	Asn	Gly	Glu
			20					25					30		
Leu	Arg	Val	Gly	Val	Arg	Arg	Ala	Met	Arg	Gln	Leu	Asn	Asn	Val	Pro
		35				40						45			
Ser	Ser	Ile	Met	Pro	Ser	His	Ser	Met	His	Ile	Gly	Val	Leu	Ala	Thr
	50					55					60				
Ala	Trp	His	Ala	Ile	Ser	Thr	Gly	Thr	Met	Phe	Thr	Val	Tyr	Tyr	Lys
65					70					75					80
Pro	Arg	Thr	Ser	Pro	Ala	Glu	Phe	Ile	Ile	Pro	Phe	Asp	Lys	His	Ile
			85					90						95	
Glu	Ser	Ala	Lys	Phe	Asp	Tyr	Ser	Ile	Gly	Met	Arg	Phe	Arg	Met	Thr
		100						105					110		

Phe Glu Trp
 115

<210> 827
 <211> 199
 <212> PRT
 <213> Eucalyptus grandis

<400> 827

Ser	Ser	Val	His	Asp	Ile	Ser	Glu	Asn	Gly	Glu	Ala	Asp	Glu	Gln	Gln
1				5					10					15	
Lys	His	Ser	Glu	Gln	His	Glu	Ser	Ser	Pro	Ala	Thr	Gly	Val	Pro	His
			20					25					30		

Cys Ser Ala Asp Gln Leu Phe Ala Val Ile Glu Val Glu Asn Glu Val
 210 215 220
 Cys Ala Gln Gln Ser Asp Ala Asn Val His
 225 230

<210> 836
 <211> 59
 <212> PRT
 <213> Eucalyptus grandis

<400> 836
 His Gly Ala Thr Trp Arg Arg Lys Glu Ala Asn Gly Gly Ser Glu Ala
 1 5 10 15
 Ser Asp Ala Val Leu Pro Arg Ala His His Arg His Arg Tyr Lys Gly
 20 25 30
 Val Arg Met Arg Lys Trp Gly Lys Trp Val Ala Glu Ile Arg Gln Pro
 35 40 45
 Asn Ser Arg Asp Arg Ile Trp Leu Gly Ser Tyr
 50 55

<210> 837
 <211> 38
 <212> PRT
 <213> Eucalyptus grandis

<400> 837
 Glu Leu Leu Gln Ile Gln Arg Lys Arg Lys Arg Met Glu Ser Asn Arg
 1 5 10 15
 Glu Ser Ala Lys Arg Ser Arg Leu Arg Lys Gln Gln His Leu Asp Glu
 20 25 30
 Leu Thr Thr Glu Val Gly
 35

<210> 838
 <211> 167
 <212> PRT
 <213> Eucalyptus grandis

<400> 838
 Met Ala Pro Arg Glu Lys Pro Ser Val Ala Ala Ile Pro Asn Pro Asn
 1 5 10 15
 Gly Ala Lys Glu Ile Arg Phe Arg Gly Val Arg Lys Arg Pro Trp Gly
 20 25 30
 Arg Tyr Ala Ala Glu Ile Arg Asp Pro Gly Lys Lys Thr Arg Val Trp
 35 40 45
 Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Thr
 50 55 60
 Ala Ala Arg Glu Phe Arg Gly Ala Lys Ala Lys Thr Asn Phe Pro Thr
 65 70 75 80
 Ser Ala Glu Leu Ile Ser Ser Ser Arg Ser Pro Ser Gln Ser Ser Ser
 85 90 95
 Leu Asp Glu Pro Ser Pro Pro Pro Pro Ala Gly Ala Val Gln Ala Ala
 100 105 110
 Ala Leu Gly Pro Pro Leu Asp Leu Ser Leu Gly Arg His Pro Val Ala
 115 120 125
 Ala Ala Ala Ala Gly Pro Gly Pro Tyr Phe Pro Gly Ala Ala Ala Met
 130 135 140

Cys Phe Pro Val Met Pro Pro Pro Pro Arg Pro Val Phe Phe Phe Asp
 145 150 155 160
 Pro Phe Gly Arg Met Glu His
 165

<210> 839
 <211> 84
 <212> PRT
 <213> Eucalyptus grandis

<400> 839
 Cys Leu Gly Leu Ser Ser Val Ala Ala Asn Ala Glu Lys Leu Ala Ala
 1 5 10 15
 Leu Gln Asn Glu Tyr His Phe Ala Lys Ala Arg Ile Asp Glu Asp His
 20 25 30
 Glu Lys Ala Gln Arg Leu Glu Lys Lys Val Lys Thr Leu Thr Phe Gly
 35 40 45
 Tyr Gln Met Arg Glu Lys Thr Leu Arg Asp Gln Ile Glu Ser Thr Phe
 50 55 60
 Lys Gln Leu Asp Thr Ala Gly Thr Glu Leu Glu Cys Phe Pro Ala Leu
 65 70 75 80
 Gln Lys Gln Glu

<210> 840
 <211> 157
 <212> PRT
 <213> Eucalyptus grandis

<400> 840
 Pro Ser Ser Pro Val Ser Thr Lys Thr His Pro Pro Tyr Leu Cys Thr
 1 5 10 15
 Arg Pro Thr Arg Leu Ser Gln Gly Leu Arg Tyr Arg Arg Leu Ala Ala
 20 25 30
 Lys His Glu Glu Lys Pro Ser Ala Val Leu Asp Lys Ser Gln Asp Pro
 35 40 45
 Thr Asp Ser Ala Lys Pro Ser Lys Lys Pro Arg His Arg His Ser Pro
 50 55 60
 Thr Gln Leu Ala Ala Leu Asn Glu Leu Phe Glu Lys Ser Glu His Pro
 65 70 75 80
 Thr Leu Glu Glu Arg Gly Gln Leu Ala Glu Lys Leu Gly Met Glu Thr
 85 90 95
 Lys Thr Val Asn Ala Trp Phe Gln Asn Lys Arg Ala Ser Thr Lys Lys
 100 105 110
 Arg Asn Lys Gly Gly Thr Ser Glu Pro His Pro Ala Thr Ser Gln Asn
 115 120 125
 Asp Leu Ser Glu Asp Ala Leu Lys Thr Pro Ser Ala Leu Pro Ser Ile
 130 135 140
 Ala Asn Leu Leu Asn Asp Ala Pro Ser Ser Ala Ser Pro
 145 150 155

<210> 841
 <211> 86
 <212> PRT
 <213> Eucalyptus grandis

<400> 841

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<210> 847
<211> 84
<212> PRT
<213> Eucalyptus grandis
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<210> 848
<211> 60
<212> PRT
<213> Eucalyptus grandis
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Arg Asn Arg Ala Met Ala Thr Ser Ser Ala Trp Trp
 50 55 60

<210> 849
 <211> 90
 <212> PRT
 <213> Eucalyptus grandis

<400> 849
 Gly Val Gly Phe Pro Asp Pro Gly Pro Asp Asn Gly Gln Val Leu Asp
 1 5 10 15
 Ala Arg Asp Pro Leu Ala Glu Lys Lys Leu Glu Leu Ala Thr Cys Gln
 20 25 30
 Arg Arg Val Glu Glu Met Leu Lys His Ser Lys Ala Val Glu Val
 35 40 45
 Thr Arg Thr Ser Thr Leu Asn Asn Leu Gln Thr Gly Leu Pro Gly Val
 50 55 60
 Phe Gln Ala Leu Ala Ser Phe Ser Ser Leu Phe Met Glu Val Leu Asp
 65 70 75 80
 Thr Val Cys Thr Arg Ser Tyr Ala Ile Lys
 85 90

<210> 850
 <211> 52
 <212> PRT
 <213> Eucalyptus grandis

<400> 850
 Met Ala Ala Pro Pro Ala Glu Gln Ser Gly Ser Ala Ser Gly Gly Glu
 1 5 10 15
 Ser Gln Arg Ser Val Pro Thr Pro Phe Leu Thr Lys Thr Tyr Gln Leu
 20 25 30
 Val Asp Asp Pro Ala Ile Asp Ala Val Ile Ser Trp Asn Gly Asp Gly
 35 40 45
 Ser Ser Phe Ile
 50

<210> 851
 <211> 52
 <212> PRT
 <213> Eucalyptus grandis

<400> 851
 Met Asp Pro Met Asp Ile Val Gly Lys Ser Lys Glu Asp Ala Ser Leu
 1 5 10 15
 Pro Lys Ala Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Pro Asp
 20 25 30
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Ile Glu Cys Cys Val
 35 40 45
 Glu Phe Ile Asn
 50

<210> 852
 <211> 121
 <212> PRT
 <213> Eucalyptus grandis

<400> 852

Met	Asn	Ser	Pro	Leu	Ala	Gln	Leu	Val	Asn	Pro	Arg	Arg	Met	His	Thr
1				5					10					15	
Tyr	Glu	Pro	Phe	Asp	Gln	Phe	Pro	Met	Trp	Gly	Asp	Thr	Phe	Lys	Ala
			20					25					30		
Asp	Lys	Val	Lys	Asn	Leu	Glu	Ala	Ser	Ser	Ser	Val	Ile	Val	His	Ala
		35					40					45			
Val	Asp	Asp	Gly	Leu	Asp	Lys	Lys	Phe	Glu	Tyr	Val	Ser	His	Glu	Ser
	50					55					60				
Ala	Glu	Asn	Ser	Ser	Ser	Arg	Ser	Asp	Gln	Glu	Ala	Asn	Arg	Pro	Asp
65					70					75					80
Lys	Val	Gln	Arg	Arg	Leu	Ala	Gln	Asn	Arg	Glu	Ala	Ala	Arg	Lys	Ser
			85					90						95	
Arg	Leu	Arg	Lys	Lys	Lys	Tyr	Val	Gln	Gln	Leu	Glu	Ser	Ser	Arg	Leu
			100					105						110	
Lys	Leu	Ala	Gln	Leu	Glu	Leu	Glu	Leu							
		115						120							

<210> 853

<211> 293

<212> PRT

<213> Eucalyptus grandis

<400> 853

Phe	Val	Tyr	Gly	Ile	Ile	Pro	Glu	Lys	Gly	Lys	Pro	Val	Ser	Gly	Ala
1				5					10					15	
Ser	Asp	Asn	Leu	Arg	Ala	Trp	Trp	Lys	Glu	Lys	Val	Arg	Phe	Asp	Arg
			20					25					30		
Asn	Gly	Pro	Ala	Ala	Ile	Ala	Lys	Tyr	Arg	Ala	Asp	His	Ser	Ile	Pro
		35					40					45			
Gly	Asn	Gly	Glu	Asp	Ala	Ala	Thr	Ile	Gly	Pro	Ile	Pro	His	Thr	Leu
	50					55					60				
Gln	Glu	Leu	Gln	Asp	Thr	Thr	Leu	Gly	Ser	Leu	Leu	Ser	Ala	Leu	Met
65				70					75						80
Gln	His	Cys	Asn	Pro	Pro	Gln	Arg	Arg	Phe	Pro	Leu	Glu	Lys	Gly	Val
			85						90					95	
Ala	Pro	Pro	Trp	Trp	Pro	Thr	Gly	Glu	Glu	Glu	Trp	Trp	Pro	Gln	Leu
			100					105						110	
Gly	Leu	Pro	Ala	Asp	Gln	Gly	Pro	Pro	Pro	Tyr	Lys	Lys	Pro	His	Asp
		115					120					125			
Leu	Lys	Lys	Ala	Trp	Lys	Val	Ser	Val	Leu	Thr	Ala	Val	Ile	Lys	His
	130					135					140				
Met	Ser	Pro	Asp	Ile	Ser	Lys	Ile	Arg	Lys	Leu	Val	Arg	Gln	Ser	Lys
145					150					155					160
Cys	Leu	Gln	Asp	Lys	Met	Thr	Ala	Lys	Glu	Ser	Ala	Thr	Trp	Leu	Ala
			165						170					175	
Ile	Ile	Asn	Gln	Glu	Glu	Ala	Leu	Ser	Arg	Lys	Leu	Tyr	Pro	Asn	Ser
		180						185					190		
Phe	Pro	Pro	Val	Cys	Ser	Asp	Ser	Gly	Phe	Gly	Ser	Tyr	Val	Ile	Ser
		195					200					205			
Asp	Ala	Ser	Asp	Tyr	Asp	Val	Glu	Gly	Ala	Asp	Asp	Glu	Pro	Lys	Phe
	210				215						220				
Glu	Ala	Glu	Glu	Cys	Lys	Pro	Phe	Asp	Pro	Ser	Ala	Phe	Gly	Ile	Gly
225					230					235					240
Pro	Arg	Val	Ser	Thr	Gly	Glu	Leu	Leu	Ile	His	Pro	Leu	Val	Ser	Gln
				245					250					255	
Ile	Lys	Gly	Glu	Val	Asn	Glu	Thr	Lys	Thr	Asn	Ser	Arg	Leu	Val	Ser

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<210> 860
<211> 181
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 861
<211> 58
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145 150 155 160
 Asn Pro Gly Leu Ser Phe Gly Asp Val Ser Arg Glu Ile Ala Asp Lys
 165 170 175
 Trp Arg Gly Leu Ser Ala

<210> 864
 <211> 55
 <212> PRT
 <213> Eucalyptus grandis

<400> 864
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys
 20 25 30
 Tyr Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Leu Ser Ser
 35 40 45
 Tyr Ser Ser Met Glu Gly Val
 50 55

<210> 865
 <211> 151
 <212> PRT
 <213> Eucalyptus grandis

<400> 865
 Asp Lys Ser Ser Ser Pro Val Pro Pro Gln Asp Gln Thr Gly Val His
 1 5 10 15
 Val Tyr His Pro Asp Trp Ala Ala Met His Ala Tyr Tyr Gly Pro Arg
 20 25 30
 Val Ala Leu Pro Pro Tyr Tyr Asn Ser Ala Val Ser Ser Gly His Gly
 35 40 45
 Pro His Pro Tyr Met Trp Gly Pro Pro Gln Pro Met Met Pro Pro Tyr
 50 55 60
 Gly Pro Pro Tyr Ala Ala Ile Tyr Ser His Gly Gly Val Tyr Gly His
 65 70 75 80
 Pro Ala Ile Pro Leu Thr Pro Thr Pro Leu Ala Ala Glu Thr Pro Lys
 85 90 95
 Lys Ser Ser Ala Asn Ser Asp Asn Gly Leu Val Lys Lys Leu Lys Ser
 100 105 110
 Phe Glu Gly Leu Ala Met Ser Ile Gly Ser Gly Gly Asp Ala Asp Ser
 115 120 125
 Ala Asp Asp Gly Thr Asp Lys Arg Ser Ser Gln Ser Ala Asp Ser Gly
 130 135 140
 Asp Ser Ser Asp Glu Asp Gln
 145 150

<210> 866
 <211> 203
 <212> PRT
 <213> Eucalyptus grandis

<400> 866
 Arg Phe Lys Gln Leu Leu Glu Glu Ala Ser Gln Asp Ile Asp His Thr
 1 5 10 15
 Thr Asp Tyr Tyr Thr Phe Arg Lys Lys Trp Gly Asn Asp Pro Arg Phe

Met Gln Asn Ile Arg Glu Ala Ile Glu Lys Tyr Ser Tyr Val Ser Met
 35 40 45
 Asp Thr Glu Phe Leu Ser Gly Ala Arg Pro Ile Gly Asn Phe Lys Thr
 50 55 60
 Ser Ser Asp Tyr His Tyr Gln Thr Met Arg Cys Asn Val Asp Leu Leu
 65 70 75 80
 Lys Ile Ile Gln Val Gly Ile Thr Leu Ala Asp Glu Glu Gly Leu Phe
 85 90 95
 Pro Gln Asp Cys Ser Thr Trp Gln Val Gln Leu
 100 105

<210> 869
 <211> 85
 <212> PRT
 <213> Eucalyptus grandis

<400> 869
 Met Gly Arg Ser Pro Cys Cys Glu Gly Asn Gly Leu Lys Lys Gly Pro
 1 5 10 15
 Trp Ser Ser Glu Glu Asp Lys Lys Leu Leu Asp Phe Ile Gln Gln His
 20 25 30
 Gly His Gly Ser Trp Ile Ser Leu Pro Lys Arg Ala Gly Leu Asn Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Trp Pro Asp
 50 55 60
 Ile Lys Arg Gly Ser Phe Ser Pro Glu Glu Glu Gln Thr Ile Leu His
 65 70 75 80
 Leu His Ser Val Leu
 85

<210> 870
 <211> 85
 <212> PRT
 <213> Eucalyptus grandis

<400> 870
 Met Pro Trp Lys Thr Gly Leu Thr Gly Ser Lys Thr Glu Glu Asp Lys
 1 5 10 15
 Ala Leu Gln Leu Cys Arg Glu Arg Lys Lys Ser Val Arg Gln Ala Val
 20 25 30
 Asp Gly Trp Gly Ser Leu Val Tyr Ala His Phe Met Phe Val Gln Ser
 35 40 45
 Leu Arg Asn Val Gly Thr Ala Leu Thr Lys Phe Phe Glu Thr Glu Ser
 50 55 60
 Pro Asn Gly Ser Pro Ser Tyr Ala Ser Met Ser Thr Thr Pro Glu Pro
 65 70 75 80
 Ile Ala Leu Thr Glu
 85

<210> 871
 <211> 104
 <212> PRT
 <213> Eucalyptus grandis

<400> 871
 Gly Leu Leu Arg Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr
 1 5 10 15

Leu Arg Pro Gly Ile Lys Arg Gly Ser Phe Thr Asp Gln Glu Glu Lys
 20 25 30
 Met Ile Val His Leu Gln Ala Leu Leu Gly Asn Arg Gly Ala Ala Ile
 35 40 45
 Ala Ser Tyr Leu Pro Gln Arg Thr Asp Asn Asp Ile Lys Asn Tyr Trp
 50 55 60
 Asn Thr His Leu Lys Lys Lys Leu Lys Lys Leu Gln Gly Gln Ala Asn
 65 70 75 80
 Pro Asp Asp Asp Asp His Asn His His Pro Gln Gly Phe Asn Ala Thr
 85 90 95
 Ser His Ser Asn Pro Lys Gly Gln
 100

<210> 872

<211> 102

<212> PRT

<213> Eucalyptus grandis

<400> 872

Met Ala Arg Thr Pro Cys Cys Glu Lys Met Gly Met Lys Lys Gly Pro
 1 5 10 15
 Trp Thr Pro Glu Glu Asp Gln Ile Leu Ile Ser His Ile His Gln Phe
 20 25 30
 Gly His Ser Asn Trp Arg Ala Leu Pro Arg Gln Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Val Lys Arg Gly Asn Phe Thr Asp Asp Glu Arg Asp Thr Ile Ile Glu
 65 70 75 80
 Leu His Gln Val Leu Gly Asn Arg Trp Ser Ala Ile Ala Ser Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn
 100

<210> 873

<211> 125

<212> PRT

<213> Eucalyptus grandis

<400> 873

Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr His
 1 5 10 15
 Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Leu Arg
 20 25 30
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
 35 40 45
 Leu Lys Arg Gly Leu Leu Ser Glu Tyr Glu Glu Lys Met Val Ile Asp
 50 55 60
 Leu His Ala Gln Leu Gly Asn Arg Trp Ser Lys Ile Ala Ser His Leu
 65 70 75 80
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile
 85 90 95
 Lys Lys Lys Leu Lys Lys Met Gly Ile Asp Pro Leu Thr His Lys Pro
 100 105 110
 Leu Val Thr Asn Asn Asp Asn Thr Thr Asp Gln Gln Pro
 115 120 125

<210> 874
 <211> 114
 <212> PRT
 <213> Eucalyptus grandis

<400> 874
 Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu
 1 5 10 15
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn
 20 25 30
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala
 35 40 45
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn
 50 55 60
 Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln
 65 70 75 80
 Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Asp Ala His
 85 90 95
 Lys Ser His Asn Phe Ser Leu His Arg Phe Tyr Asn Ile Ile Pro Ile
 100 105 110
 Asp His

<210> 875
 <211> 127
 <212> PRT
 <213> Eucalyptus grandis

<400> 875
 Asn Gly Asp Ser Val Lys Asp Asp Leu Asp Thr Asp Glu Tyr Glu Thr
 1 5 10 15
 His Ala Thr Val Leu Asp Lys Leu Leu Ala Trp Glu Lys Lys Leu Tyr
 20 25 30
 Glu Glu Val Lys Gln Gly Glu His Met Lys Leu Glu Tyr Gln Lys Lys
 35 40 45
 Val Ala Leu Leu Asn Lys Gln Lys Lys Arg Gly Ala Ser Gly Glu Ser
 50 55 60
 Leu Glu Lys Thr Lys Ala Ala Val Ser His Leu His Thr Thr Tyr Ile
 65 70 75 80
 Val Asp Met Gln Ser Met Asp Ser Thr Ala Ser Glu Ile Asn His Ile
 85 90 95
 Arg Asp Lys Gln Leu Tyr Pro Lys Leu Ala Gln Leu Val Asp Gly Met
 100 105 110
 Ala Asn Met Trp Glu Lys Met Arg Met His His Asp Lys Gln Glu
 115 120 125

<210> 876
 <211> 153
 <212> PRT
 <213> Eucalyptus grandis

<400> 876
 Pro Glu Thr Val His Val Gln Asn Tyr Ser Pro Ile His Gln Met Gly
 1 5 10 15
 Ile Asp Gly Phe Phe Pro Ala His Pro Ser Pro Gln Asn Pro Ser Tyr
 20 25 30
 His Ser Tyr Ser Pro Asn Asn Arg Pro Asn Phe Pro Pro Pro Ser Pro

		35					40					45					
Gln	Thr	Ser	Gln	Trp	Asp	Tyr	Phe	Trp	Asn	Pro	Phe	Ser	Ser	Leu	Asp		
	50					55					60						
Tyr	Tyr	Gly	Tyr	Pro	Thr	Arg	Ser	Ser	Ile	Asp	His	Met	Ala	Met	Asp		
65					70					75					80		
Asp	Glu	Thr	Arg	Gly	Leu	Arg	Gln	Val	Arg	Glu	Glu	Glu	Gly	Ile	Pro		
			85						90					95			
Asp	Leu	Glu	Glu	Glu	Thr	Glu	His	Glu	Glu	Cys	Asp	His	His	Ser	Tyr		
		100						105					110				
Val	Asp	Glu	Asp	Arg	Gly	Asn	Arg	Asp	Ala	Asn	Phe	Pro	Thr	Glu	Glu		
	115					120						125					
Val	Leu	Val	Glu	Asp	Val	Asp	Asp	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Gly		
	130					135					140						
Asn	Arg	His	Ser	Cys	Glu	Ser	Glu	Asp									
145					150												

<210> 877

<211> 62

<212> PRT

<213> Eucalyptus grandis

<400> 877

Val	Leu	Arg	Ala	Gln	Leu	Met	Glu	Leu	Thr	Asp	Arg	Leu	Arg	Ser	Leu		
1				5					10					15			
Asn	Ser	Val	Leu	Gln	Val	Val	Glu	Val	Val	Ser	Gly	Leu	Ala	Ile	Asp		
		20					25					30					
Ile	Pro	Glu	Ile	Pro	Asp	Pro	Leu	Met	Asn	Pro	Trp	Gln	Leu	Pro	Cys		
	35					40					45						
Pro	Met	Gln	Pro	Ile	Thr	Ala	Ser	Ala	Asp	Met	Leu	Gln	Leu				
	50					55					60						

<210> 878

<211> 135

<212> PRT

<213> Eucalyptus grandis

<400> 878

Leu	Thr	Leu	Thr	Ala	Ala	Ser	Thr	Val	Ile	Phe	Ala	Glu	Leu	Ser	Trp		
1				5					10					15			
Thr	Pro	Gly	Asp	Leu	Ile	Gln	Ala	Glu	Asp	Arg	Ala	His	Arg	Ile	Gly		
		20					25					30					
Gln	Val	Ser	Ser	Val	Asn	Ile	Tyr	Tyr	Leu	Leu	Ala	Asn	Asp	Thr	Val		
	35					40					45						
Asp	Asp	Ile	Ile	Trp	Asp	Val	Val	Gln	Ser	Lys	Leu	Glu	Asn	Leu	Gly		
	50				55					60							
Gln	Val	Leu	Asp	Gly	His	Glu	Asn	Thr	Leu	Glu	Val	Ser	Ala	Ser	Gln		
65					70				75						80		
Pro	Thr	Arg	Asn	Ser	Pro	Ala	Lys	Gln	Lys	Thr	Phe	Asn	Ser	Pro	Gly		
			85					90						95			
Lys	Gln	His	Thr	Phe	Asn	Ser	Pro	Gly	Lys	Gln	Gln	Lys	Phe	Asn	Ser		
		100					105					110					
Pro	Gly	Lys	Gln	Thr	Thr	Leu	Asp	Ser	Phe	Met	Lys	Arg	Cys	Asn	Ser		
	115					120						125					
Gly	Asp	Pro	Ser	Glu	His	Gln											
	130					135											

<210> 879

<211> 138
 <212> PRT
 <213> Eucalyptus grandis

<400> 879
 Met Ala Leu Glu Ala Ile Asn Ser Pro Thr Ala Ala Ser Ala Pro Phe
 1 5 10 15
 Gln Phe Met Glu Glu Pro Leu Ser Ser Arg Phe Leu Glu Pro Leu Asn
 20 25 30
 Lys Arg Lys Arg Ser Lys Arg Pro His His Pro Pro Ser Glu Asp Glu
 35 40 45
 Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Ser Gly Ala Ala Pro
 50 55 60
 Lys Pro Asn His His Ala Ser Pro Ala Pro Leu Pro Pro Pro Pro
 65 70 75 80
 Pro Ala Pro Thr Lys Pro Glu Glu Ala Ala Ala Thr Ala Thr Ala Thr
 85 90 95
 Ala Ala Pro Ala Asn Asn Leu Ser Tyr Lys Cys Ala Val Cys Gly Lys
 100 105 110
 Gly Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg
 115 120 125
 Lys Ser Ala Ala Ala Ala Ala Ala Ala Ala
 130 135

<210> 880
 <211> 124
 <212> PRT
 <213> Eucalyptus grandis

<400> 880
 Ala Ile Ala Leu Val Leu Ala Lys Arg Glu Ile Ile Arg Ser Ile Gly
 1 5 10 15
 Thr Gly Leu Asp Trp Ser Ser Pro Ser Ala Gly Ser Ser Thr Ser Leu
 20 25 30
 Pro Glu Ile Lys Gly Thr Leu Val Ile Cys Pro Val Val Ala Val Thr
 35 40 45
 Gln Trp Val Gly Glu Ile Asn Cys Ser Thr Ala Gln Gly Ser Thr Lys
 50 55 60
 Val Leu Val Tyr His Gly Ala Asn Arg Gly Lys Thr Ala Asp Gln Phe
 65 70 75 80
 Lys Asn Phe Asp Phe Val Val Thr Thr Tyr Ser Leu Val Glu Gly Glu
 85 90 95
 Tyr Arg Lys Phe Val Met Pro Pro Lys Lys Lys Cys Ile Tyr Cys Gly
 100 105 110
 Lys Leu Leu Tyr Lys Glu Lys Met Thr Val His Leu
 115 120

<210> 881
 <211> 196
 <212> PRT
 <213> Eucalyptus grandis

<400> 881
 Pro Asp Leu Pro Gly Asp Asp Leu Ala Leu Glu Phe Glu Glu Phe Asp
 1 5 10 15
 Phe Gln Ser Leu Phe Asp Glu Leu Ser Pro Asp Ala Ala Gly Leu Leu
 20 25 30

Asp Ala Ser Asp Val Asp Ala Ser Ser Pro Gly Ser Leu Ser Ser Trp
 35 40 45
 Ile Gly Glu Ile Glu Gly Met Leu Met Lys Asp Asp Glu Glu Ala Val
 50 55 60
 Ala Val Glu Pro Ser Gln Glu Val Phe Asp Arg Phe Phe Ala Gly Leu
 65 70 75 80
 Leu Val Asp Ser Pro Glu Gly Gly Pro Ala Glu Ala Thr Asp Gly Ala
 85 90 95
 Ser Asp Lys Glu Ser Asn Ser Ser Asp Gly Gly Gly Gly Gly Gly Gly
 100 105 110
 Glu Arg Asp Glu Lys Leu Val Val Gly Asp Asn Glu Leu Ser Glu Asp
 115 120 125
 Ala Asp Asp Asp Asp Pro Val Ser Lys Lys Gln Arg Arg Gln Leu Arg
 130 135 140
 Asn Lys Asp Ala Ala Ala Arg Ser Arg Glu Arg Lys Arg Ser Tyr Val
 145 150 155 160
 Lys Glu Leu Glu Met Lys Ser Lys Tyr Met Glu Gly Glu Cys Arg Arg
 165 170 175
 Leu Gly Arg Leu Leu Gln Cys Phe Val Ala Glu Asn Gln Ala Leu Arg
 180 185 190
 Leu Asn Leu Glu
 195

<210> 882
 <211> 102
 <212> PRT
 <213> Eucalyptus grandis

<400> 882
 Val Ile Ser Ser Gln Ser Met His Leu Gly Val Leu Ala Thr Ala Ser
 1 5 10 15
 His Ala Val Thr Gln Thr Leu Phe Val Val Tyr Tyr Lys Pro Arg
 20 25 30
 Thr Ser Gln Phe Ile Ile Ser Leu Asn Lys Tyr Leu Glu Ala Leu Asn
 35 40 45
 Asn Lys Phe Thr Val Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu
 50 55 60
 Asp Ser Pro Glu Arg Arg Phe Ser Gly Thr Ile Val Gly Val Glu Asp
 65 70 75 80
 Phe Ser Pro Gln Trp Asp Asn Ser Ser Trp Arg Ser Leu Lys Val His
 85 90 95
 Trp Asp Glu His Ala Ser
 100

<210> 883
 <211> 69
 <212> PRT
 <213> Eucalyptus grandis

<400> 883
 Phe Asn Gln Leu Asp Pro Arg Ile Asn Arg Lys Pro Phe Ser Glu Glu
 1 5 10 15
 Glu Glu Glu Arg Leu Leu Thr Ala His Lys Leu Cys Gly Asn Lys Trp
 20 25 30
 Ala Met Ile Ala Arg Leu Phe Pro Gly Arg Thr Asp Asn Ala Val Lys
 35 40 45
 Asn His Trp His Val Ile Val Ala Arg Lys Gln Arg Glu Gln Ser Asn

50
Asn Ala Arg Gly Arg
65

55

60

<210> 884
<211> 74
<212> PRT
<213> Eucalyptus grandis

<400> 884
Gln Lys Tyr Phe Ile Arg Gln Ser Asn Val Ser Lys Arg Lys Arg Arg
1 5 10 15
Ser Ser Leu Phe Asp Ile Val Ala Glu Glu Ser Val Asp Val Pro Met
20 25 30
Gly Ser Arg Asp Phe Phe Ala Val Asp Glu Gln Gln Gln Glu Thr Glu
35 40 45
Val Asn Asp Ala Leu Gln Gln Leu Pro Pro Asp Val Asp Glu Glu Cys
50 55 60
Glu Ser Met Asp Ser Thr Asn Ser Asn Thr
65 70

<210> 885
<211> 61
<212> PRT
<213> Eucalyptus grandis

<400> 885
Ser Ser Ser Ser Arg His Glu Ser Arg His Pro Ile Pro Leu Leu Thr
1 5 10 15
Asn Gly Gln Pro Met Ser Gly Glu Ile Pro Cys Ala Ser Ile Asp Ser
20 25 30
Pro Ser Val Arg Thr Thr Ser Gly Pro Leu Gly Pro Phe Asp Lys His
35 40 45
Val His Ser Leu Pro Tyr Val Asp Pro Arg Gln Pro Val
50 55 60

<210> 886
<211> 142
<212> PRT
<213> Eucalyptus grandis

<400> 886
Ser Pro Pro Leu Ser Ala His Val Ala Ser His Lys Gly Leu His Gln
1 5 10 15
Ala Ser Lys Pro Lys Ile His Glu Cys Asn Ile Cys Gly Ser Glu Phe
20 25 30
Ala Ser Gly Gln Ala Leu Gly Gly His Met Arg Arg His Arg Ser Ala
35 40 45
Pro Pro Pro Thr Ala Thr Ser Ala Asp Ala Thr Ser Pro Thr Asn Pro
50 55 60
Pro Ala Ala Ala Ala Ile Thr Thr Glu Lys Ser Arg Asn Ile Leu Ser
65 70 75 80
Leu Asp Leu Asn Leu Pro Ala Pro Asn Gly Gly Gly Ser Pro Pro Pro
85 90 95
Ser Ala Pro Pro Pro Gly Glu Leu Glu Val Pro Ile Arg His Lys Ser
100 105 110
Thr Ala His His Thr Ser Leu Ala Arg Leu Gly Gly Leu Pro Leu Leu

115 120 125
 Lys Lys Lys Glu Lys Thr Gly Ser His Val Asn Gln Cys Asn
 130 135 140

<210> 887
 <211> 139
 <212> PRT
 <213> Eucalyptus grandis

<400> 887
 Ala Val Ser Asp Ile Asn Leu Val Ser Asn Ser Thr His Ser Ser Tyr
 1 5 10 15
 Glu Asp Gly Gly Ser Pro Arg Arg Ile Thr Ser Glu Ser Asp Pro Lys
 20 25 30
 Asp Ala Pro Met Gly Thr Glu Ser Leu Leu Ser Ala Pro Glu Ala Val
 35 40 45
 Glu Leu Ser Asp Thr Gly Thr Ser Phe Thr Phe Lys Met Asp Ser Ser
 50 55 60
 Met Gln Arg Lys Pro Pro Val Asp Glu Ser Pro Arg Met His Pro Leu
 65 70 75 80
 Pro Met Asn Leu Thr Thr Glu Glu Gly Asp Asn Asn Val Ser Cys Gln
 85 90 95
 Leu Asn Leu Ser Leu Ala Ser Ser Leu Leu Gln Val Asp His Ser Gln
 100 105 110
 Gln Phe Asn Arg Leu Asn Val Leu Gly Ser Glu Thr Ser Lys Ser Pro
 115 120 125
 Asp Ala Arg Ser Asn Ala Ser Ile Thr Glu Ser
 130 135

<210> 888
 <211> 36
 <212> PRT
 <213> Eucalyptus grandis

<400> 888
 His Pro Glu Tyr Asn Ser Ser Pro Val Gly Tyr Met Glu Thr Asn Lys
 1 5 10 15
 Ala Arg Leu Val Leu Glu Lys Asp Asp Leu Gly Leu Asn Leu Met Pro
 20 25 30
 Pro Ser Thr Cys
 35

<210> 889
 <211> 176
 <212> PRT
 <213> Eucalyptus grandis

<400> 889
 Asn Ile Gly Ala Lys Ala Asp Val Phe His Ile Leu Ser Gly Met Trp
 1 5 10 15
 Lys Thr Pro Ala Glu Arg Cys Phe Met Trp Leu Gly Gly Phe Arg Ser
 20 25 30
 Ser Glu Leu Leu Lys Ile Leu Gly Asn His Leu Glu Pro Leu Thr Asp
 35 40 45
 Gln Gln Leu Met Gly Ile Cys Asn Leu Gln Gln Ser Ser Gln Gln Ala
 50 55 60
 Glu Asp Ala Leu Ser Gln Gly Met Glu Ala Leu Gln Gln Ser Leu Val

65					70					75					80
Asp	Thr	Leu	Ser	Ser	Thr	Thr	Leu	Ser	Pro	Thr	Gly	Ser	Gly	Asn	Val
				85					90					95	
Ala	Glu	Tyr	Met	Gly	Gln	Met	Ala	Ile	Ala	Met	Gly	Lys	Leu	Ala	Thr
			100					105					110		
Leu	Glu	Asn	Phe	Val	His	Gln	Ala	Asp	Leu	Leu	Arg	Gln	Gln	Thr	Leu
		115					120					125			
Gln	Gln	Met	His	Arg	Ile	Leu	Thr	Thr	Arg	Gln	Ala	Ala	Arg	Ala	Leu
	130					135				140					
Leu	Val	Ile	Asn	Asp	Tyr	Ile	Ser	Arg	Leu	Arg	Ala	Leu	Ser	Ser	Leu
145					150					155					160
Trp	Leu	Ala	Arg	Pro	Arg	Thr	Glu	Asn	Ile	Cys	Ser	Ala	Lys	Leu	Phe
			165					170						175	

<210> 890
 <211> 33
 <212> PRT
 <213> Eucalyptus grandis

Lys	Lys	Arg	Leu	Met	Val	Ala	Ser	Ala	Phe	Gly	Glu	Asp	Glu	Lys	Ala
1				5				10						15	
Gly	Arg	Gln	Thr	Arg	Leu	Thr	Val	Glu	Asp	Leu	Asn	Tyr	Leu	Phe	Met
			20					25					30		
Ala															

<210> 891
 <211> 51
 <212> PRT
 <213> Eucalyptus grandis

Met	Arg	Asp	Leu	Cys	Leu	Asp	Gln	Arg	Glu	Met	Ala	Ser	Gly	Ser	Ser
1				5				10						15	
Arg	Val	Glu	Ala	Arg	Ala	Asp	Ala	Glu	Met	Ala	Leu	Tyr	Asn	Glu	Leu
			20				25						30		
Trp	Gln	Ala	Cys	Ala	Gly	Pro	Leu	Val	Ala	Val	Pro	Arg	Gln	Gly	Glu
		35				40						45			
Arg	Val	Phe													
50															

<210> 892
 <211> 77
 <212> PRT
 <213> Eucalyptus grandis

Met	Leu	Ser	Pro	Ser	Gly	Ser	Ser	Pro	Leu	Ala	Gln	Ser	Thr	Gly	Arg
1				5				10						15	
His	Pro	Leu	Tyr	Arg	Gly	Val	Arg	Ser	Arg	Ser	Gly	Lys	Trp	Val	Ser
			20				25						30		
Glu	Ile	Arg	Glu	Pro	Arg	Lys	Thr	Thr	Arg	Ile	Trp	Leu	Gly	Thr	Tyr
		35				40					45				
Pro	Asn	Pro	Glu	Met	Ala	Ala	Ala	Ala	Phe	Asp	Val	Ala	Ala	Leu	Ala
	50				55				60						
Leu	Lys	Gly	Ser	Asp	Ala	Ala	Leu	Asn	Phe	Pro	His	Asp			

65

70

75

<210> 893

<211> 95

<212> PRT

<213> Eucalyptus grandis

<400> 893

Phe	Pro	Gln	Gly	His	Met	Glu	Gln	Leu	Glu	Ala	Ser	Thr	Asn	Gln	Glu
1				5					10					15	
Leu	Asn	Gln	Arg	Ile	Pro	Leu	Phe	Asn	Leu	Thr	Ser	Lys	Ile	Leu	Cys
			20					25					30		
Gln	Val	Val	Asn	Val	Gln	Leu	Leu	Ala	Glu	Gln	Glu	Thr	Asp	Glu	Val
		35					40					45			
Tyr	Ala	Gln	Ile	Thr	Leu	Ile	Pro	Ala	Gly	Asn	Leu	Met	Glu	Pro	Thr
	50					55					60				
Ser	Pro	Asp	Pro	Val	Ser	Ala	Glu	Thr	Pro	Arg	Thr	Arg	Val	His	Ser
65					70				75					80	
Phe	Cys	Lys	Val	Leu	Thr	Ala	Ser	Asp	Thr	Ser	Thr	His	Gly	Gly	
				85					90					95	

<210> 894

<211> 79

<212> PRT

<213> Eucalyptus grandis

<400> 894

Met	Gly	Ser	Asn	Ile	Asn	Phe	Lys	Asn	Phe	Ser	Thr	Asp	Pro	Thr	Pro
1				5					10					15	
Thr	Asn	Asn	Arg	Pro	Pro	Gly	Asn	Thr	Leu	Leu	Thr	Arg	Gln	Pro	Ser
			20					25					30		
Val	Tyr	Thr	Leu	Thr	Phe	Glu	Glu	Phe	Gln	Asn	Ser	Ile	Gly	Lys	Asp
		35					40					45			
Phe	Gly	Ser	Met	Asn	Met	Asp	Glu	Leu	Ile	Lys	Asn	Ile	Trp	Ser	Ala
	50					55					60				
Glu	Glu	Asn	Gln	Ser	Met	Ala	Ser	Ala	Ser	Gly	Ala	Cys	Gly	Gly	
65					70				75						

<210> 895

<211> 57

<212> PRT

<213> Eucalyptus grandis

<400> 895

Met	Gln	Ala	Cys	Gly	Ser	Tyr	Glu	Tyr	Ser	Glu	Gln	Tyr	His	Asp	Glu
1				5					10					15	
Val	Lys	Pro	Ala	Tyr	Gly	Pro	Gln	Ile	Ser	Ala	His	Ser	Gln	Tyr	Leu
			20					25					30		
Gly	Tyr	Asn	Ser	Leu	Arg	Leu	Gly	Leu	Pro	Leu	Arg	Val	Ala	Glu	Glu
		35					40					45			
Pro	Val	Tyr	Val	Asn	Ala	Lys	Gln	Tyr							
	50						55								

<210> 896

<211> 167

<212> PRT

<213> Eucalyptus grandis

<400> 896
 Pro Asp Val Pro Leu Pro Ser Pro Ala Gly Asp Val Thr Asp Ala Glu
 1 5 10 15
 Trp Phe Tyr Val Met Ser Leu Thr Arg Ser Phe Ser Ala Gly Asp Gly
 20 25 30
 Ile Pro Gly Lys Ala Leu Ser Thr Gly Ser Leu Val Trp Leu Thr Gly
 35 40 45
 Ala Arg Glu Leu Glu Ser Tyr Lys Cys Asp Arg Ala Lys Glu Ala Glu
 50 55 60
 Leu His Gly Ile Arg Thr Met Val Cys Ile Pro Thr Gly Asp Gly Val
 65 70 75 80
 Leu Glu Leu Gly Ser Cys Asp Val Ile Pro Glu Asn Trp Gly Leu Val
 85 90 95
 Gln Arg Ala Lys Ser Leu Phe Gly Ser Asp Leu Leu Leu Pro Lys His
 100 105 110
 Pro Pro Pro Pro Pro Pro Phe Gln Leu His His Asp His Ser Asp
 115 120 125
 Ile Ser Phe Ala Asp Ile Gly Ile Ile Ala Gly Val Gln Glu Asn Asp
 130 135 140
 Phe Ala Pro His Asp Asp His Glu Lys Lys Val Lys Lys Lys Gln Pro
 145 150 155 160
 Leu Val Glu Gly Ala Gly Gly
 165

<210> 897
 <211> 125
 <212> PRT
 <213> Eucalyptus grandis

<400> 897
 Val Ala Gly Met Thr Arg Gly Arg Arg Asp Gly Ile Leu Lys Ser Glu
 1 5 10 15
 Lys Thr Arg His Val Val Lys Ile Gly Pro Met His Leu Lys Gly Val
 20 25 30
 Trp Ile Pro Tyr Glu Arg Ala Leu Glu Phe Ala Asn Arg Glu Lys Ile
 35 40 45
 Thr Glu Tyr Leu Tyr Pro Leu Phe Val His Asp Ile Gly Ala Leu Leu
 50 55 60
 Tyr His Pro Ser Asn Pro Ser Gly Ala Thr Ser Arg Ala Gly Asn Ala
 65 70 75 80
 Gln Asn Thr Leu Ala Ala Ile Asp Arg Arg Arg Asn Glu Ala Arg Met
 85 90 95
 Ala Ala Ser Ile Gln Gly Gln Ala Val Ser Gly Val Leu Val Ser Pro
 100 105 110
 Val Ala Gln Thr Ala Gly Gly Arg Pro Ser Val Asp Arg
 115 120 125

<210> 898
 <211> 120
 <212> PRT
 <213> Eucalyptus grandis

<400> 898
 Asn Asn Leu Ser Leu Tyr Asp Asn Gly Val Gly Ser Thr Pro Arg Pro
 1 5 10 15
 Arg Ser Asn Ala Glu Gln Leu Ile Phe Arg Ala Ala Leu Gln Asp Leu

			20					25				30			
Ser	Gln	Pro	Lys	Ser	Glu	Glu	Thr	Pro	Pro	Asp	Gly	Ala	Leu	Ala	Val
		35					40					45			
Pro	Leu	Leu	Arg	His	Gln	Lys	Ile	Ala	Leu	Ser	Trp	Met	Val	Lys	Lys
	50					55					60				
Glu	Thr	Ala	Ile	Asn	Cys	Cys	Gly	Gly	Ile	Leu	Ala	Asp	Asp	Gln	Gly
65					70					75				80	
Leu	Gly	Lys	Thr	Val	Ser	Thr	Ile	Ala	Leu	Ile	Leu	Lys	Glu	Arg	Pro
			85					90					95		
Pro	Thr	Phe	Lys	Gln	Cys	Gln	Glu	Asn	Pro	Lys	Gln	Glu	Leu	Gln	Thr
		100						105					110		
Phe	Asp	Leu	Asp	Glu	Asp	Glu	Asn								
	115						120								

<210> 899

<211> 58

<212> PRT

<213> Eucalyptus grandis

<400> 899

Met	Ser	Leu	Ser	Ala	Lys	Ser	Glu	Ser	Ile	Gln	Ile	Arg	Asp	Val	Trp
1				5				10					15		
Asp	Asp	Asn	Leu	Asp	Glu	Glu	Phe	Ala	Arg	Ile	Arg	Glu	Ile	Val	Asp
		20						25				30			
Asp	Tyr	Pro	Tyr	Val	Ala	Met	Asp	Thr	Glu	Phe	Pro	Gly	Ile	Val	Val
	35					40						45			
Arg	Pro	Val	Gly	Asn	Phe	Lys	Asn	Ser	Ser						
	50					55									

<210> 900

<211> 94

<212> PRT

<213> Eucalyptus grandis

<400> 900

Met	Ala	Asp	Ser	Asp	Asn	Asp	Ser	Gly	Gly	His	Asn	Asn	Ala	Asn	Ser
1				5				10					15		
Glu	Ser	Ala	Ala	Ala	Leu	Ala	Arg	Glu	Gln	Asp	Arg	Phe	Leu	Pro	Ile
		20						25				30			
Ala	Asn	Val	Ser	Arg	Ile	Met	Lys	Lys	Ala	Leu	Pro	Ala	Asn	Ala	Lys
	35					40						45			
Ile	Ser	Lys	Glu	Ala	Lys	Glu	Thr	Val	Gln	Glu	Cys	Val	Ser	Glu	Phe
	50				55					60					
Ile	Ser	Phe	Ile	Thr	Gly	Glu	Ala	Ser	Asp	Gly	Ser	Ser	Ser	Ile	Gly
65					70				75					80	
Gly	Gly	Gly	Gly	Gly	Val	Val	Asn	Ser	Gly	Gly	Gly	Ser	Ala		
				85				90							

<210> 901

<211> 169

<212> PRT

<213> Eucalyptus grandis

<400> 901

Lys	Ile	Asn	Pro	Asp	Arg	Trp	Glu	Phe	Val	Asn	Gln	Gly	Phe	Gln	Lys
1				5				10					15		
Gly	Asn	Lys	His	Leu	Leu	Lys	Asn	Ile	Lys	Arg	Arg	Cys	Lys	Phe	Ser

Gln Gln Gln Gln Gln Gln Gln Leu Gln Arg 245 250 255
 260 265

<210> 903
 <211> 101
 <212> PRT
 <213> Eucalyptus grandis

<400> 903
 Val Pro Ser Met Lys Pro Glu Tyr Pro Val Pro Asn Gly Ile Gly Ala
 1 5 10 15
 Ser Asp Phe Gly Glu Ser Phe Arg Phe Gln Lys Val Leu Gln Gly Gln
 20 25 30
 Glu Asn Leu Gly Phe Gly Thr Pro Tyr Asp Gly Ile Glu Thr Gln Ser
 35 40 45
 His Arg Leu Ser Glu Val Arg Arg His His Pro Asp Asp Ser Gly Gly
 50 55 60
 Ser Glu Ala Ala Ala Thr Arg Asn Gly Ile Thr Asn Pro Ser Val Asn
 65 70 75 80
 Ala Ser Val Thr Tyr Lys Gly Met Gly Phe Gly Glu Ser Phe Arg Phe
 85 90 95
 Arg Glu Val Leu Gln
 100

<210> 904
 <211> 142
 <212> PRT
 <213> Eucalyptus grandis

<400> 904
 Pro Pro Ser Pro Leu Leu Pro Pro Pro Ser Ile Pro Lys Thr Leu Leu
 1 5 10 15
 Arg Ile Asp Ser Gly Ser Pro Leu Arg Pro Pro Pro Pro Pro Ala Ala
 20 25 30
 Met Asp Ala Ala Pro Pro Gly Gly Gly Gly Gly Gly Gly Pro Ala
 35 40 45
 Pro Phe Leu Leu Lys Thr Tyr Glu Met Val Asp Asp Ala Gly Thr Asp
 50 55 60
 Glu Ile Val Ala Trp Ser Ser Gly Lys Thr Ser Phe Val Val Trp Asn
 65 70 75 80
 Pro Pro Glu Phe Ala Arg Leu Leu Leu Pro Thr Tyr Phe Lys His Asn
 85 90 95
 Asn Phe Ser Ser Phe Ile Arg Gln Leu Asn Thr Tyr Gly Phe Arg Lys
 100 105 110
 Ile Asp Pro Glu Arg Trp Glu Phe Ala Asn Glu Glu Phe Val Lys Asp
 115 120 125
 Lys Lys His Leu Leu Lys Asn Ile His Arg Arg Lys Pro Ile
 130 135 140

<210> 905
 <211> 80
 <212> PRT
 <213> Eucalyptus grandis

<400> 905
 Met Tyr Val Leu Glu Gly Val Thr Pro Cys Ile Gln Ser Met Gln Leu

1			5					10					15			
Gln	Ala	Gly	Asp	Thr	Val	Thr	Phe	Ser	Arg	Met	Asp	Pro	Glu	Ala	Lys	
			20					25					30			
Leu	Ile	Met	Gly	Phe	Arg	Lys	Ala	Ser	Thr	Ser	Met	Met	Gln	Asp	Ser	
		35					40					45				
Gln	Leu	Ala	Ala	Val	Ser	Asn	Gly	Asn	His	Ser	Ser	Glu	Ala	Leu	Ile	
	50					55				60						
Ser	Gly	Gly	Phe	Glu	Asn	Val	Pro	Met	Ile	Ser	Gly	Tyr	Ser	Ser	Leu	
65					70				75						80	

<210> 906
 <211> 30
 <212> PRT
 <213> Eucalyptus grandis

Arg	Thr	Gly	Lys	Ala	Glu	Ser	Glu	Cys	Leu	Cys	Pro	Arg	Asn	Ser	Gly	
1				5				10						15		
Leu	Leu	Asp	Ala	Leu	Val	His	Glu	Ser	Lys	Thr	Met	Ser	Ser			
		20					25					30				

<210> 907
 <211> 69
 <212> PRT
 <213> Eucalyptus grandis

Met	Asn	Gln	Val	Ala	Asp	Arg	Gln	Ile	Pro	Phe	Tyr	Asn	Leu	Pro	Ser	
1			5					10					15			
Lys	Ile	Leu	Cys	Arg	Val	Ile	Asn	Val	Gln	Leu	Arg	Ala	Glu	Pro	Glu	
		20					25					30				
Thr	Asp	Glu	Leu	Phe	Ala	Gln	Val	Thr	Leu	Leu	Pro	Val	Pro	Asn	Gln	
	35					40					45					
Asp	Glu	Thr	Ala	Val	Glu	Lys	Glu	Thr	Gly	Ile	Pro	Cys	Leu	Gln	Arg	
	50				55					60						
Pro	Arg	Val	His	Ser												
65																

<210> 908
 <211> 60
 <212> PRT
 <213> Eucalyptus grandis

Thr	Phe	Met	Gly	Ile	Cys	Ser	Leu	Gln	His	Ser	Ser	Gln	Gln	Ala	Glu	
1			5					10					15			
Glu	Ala	Leu	Ser	Gln	Gly	Leu	Glu	Gln	Leu	Gln	Gln	Ser	Leu	Val	Asp	
		20					25					30				
Thr	Ile	Ala	Gly	Gly	Pro	Ser	Ile	Glu	Gly	Met	Gln	Gln	Met	Ala	Ile	
	35					40					45					
Ala	Leu	Gly	Lys	Leu	Thr	Asn	Leu	Glu	Gly	Phe	Val					
	50				55					60						

<210> 909
 <211> 139
 <212> PRT
 <213> Eucalyptus grandis

20 25 30
 Leu Ser Leu Ser Thr Met Ala Arg Pro Gln Gln Arg Tyr Arg Gly Val
 35 40 45
 Arg Gln Arg His Trp Gly Ser Trp Val Ser Glu Ile Arg His Pro Leu
 50 55 60
 Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe Glu Thr Ala Glu Asp Ala
 65 70 75 80
 Ala Arg Ala Tyr Asp Glu Ala Ala Arg Leu Met Cys Gly Pro Arg Ala
 85 90 95
 Arg Thr Asn Phe Pro Tyr Asn Pro Asn Met Ser Gln Ser Leu Arg Arg
 100 105 110
 Ser Ser Ser Arg Arg His
 115

<210> 912
 <211> 88
 <212> PRT
 <213> Eucalyptus grandis

<400> 912
 Met Glu Ala Ala Ala Ala Ala Lys Val Val Gly Glu Ala Glu Glu
 1 5 10 15
 Leu Pro Lys Thr Ile Val Arg Arg Val Val Lys Glu Lys Leu Ser Arg
 20 25 30
 Cys Ser Asp Asp Gly Asp Val Ser Leu His Lys Asp Ala Leu Leu Ala
 35 40 45
 Phe Ser Glu Ser Ala Arg Ile Phe Ile His Tyr Leu Ser Ala Thr Ala
 50 55 60
 Asn Asp Ile Cys Lys Glu Ser Lys Arg Gln Thr Ile Asn Ala Asp Asp
 65 70 75 80
 Val Leu Lys Ala Leu Glu Glu Met
 85

<210> 913
 <211> 84
 <212> PRT
 <213> Eucalyptus grandis

<400> 913
 Pro Val His Glu Gln Gly Gln Leu Arg Gly Val Asp Arg Leu Glu Gly
 1 5 10 15
 Ser His Trp Val Pro Ile Gly Trp Glu Arg Ile Ser Ala Leu Ala Gln
 20 25 30
 Thr Val Gln Val Asp Ala Gly Trp Gly Met Gln Leu Asp Ser Met Asp
 35 40 45
 Asp Asp Glu Asp Leu Thr Val Ala Asp Met Glu Thr Pro Tyr Trp Glu
 50 55 60
 Arg Pro Ala Gly Pro Ile Trp Trp Cys His Phe Ser Ala Gly His Pro
 65 70 75 80
 Ala Val Glu Ala

<210> 914
 <211> 184
 <212> PRT
 <213> Eucalyptus grandis

<400> 914
 Met Lys Pro Thr Ile Asp Leu Glu Val Glu Ala Val Ser Glu Asn Asp
 1 5 10 15
 Ser Glu Ile Ser Ser Gln Val Ala Ser Asn Leu Ser Asn Gln Glu Pro
 20 25 30
 Ser Met Gly Pro Ser Asn Asp Ser Leu Ala Asn Ser Ser Tyr Leu Ile
 35 40 45
 Ser Pro Ser Ala Val Gly Ser Gly Ser Glu Thr Val Phe Leu Asp Leu
 50 55 60
 Ser Leu Gly Cys Ser Asn Asp Glu Ser Ser Gly Arg Asp Ser Val Gly
 65 70 75 80
 Val Ala Phe Ser Ser Thr Ser Glu Cys Ser Asn Glu Pro Glu Ser His
 85 90 95
 Pro Ala Ala Ala Gly Pro Thr Thr Ser Arg Val Phe Ser Cys Asn Tyr
 100 105 110
 Cys Gln Arg Lys Phe Phe Ser Ser Gln Ala Leu Gly Gly His Gln Asn
 115 120 125
 Ala His Lys Arg Glu Arg Thr Leu Ala Lys Arg Ala Met Arg Met Gly
 130 135 140
 Met Phe Ser Ser Gln Arg Tyr Ser Ser Leu Ala Ser Leu Pro Leu His
 145 150 155 160
 Gly Ser Pro Thr Val Arg Asp Leu Gly Ile Lys Ala His Ser Ser Val
 165 170 175
 His Gln Val His Gln Gly Met Leu
 180

<210> 915
 <211> 96
 <212> PRT
 <213> Eucalyptus grandis

<400> 915
 Met Trp Asn Pro Ser Ala Ala Gln Glu Asp Asp Asp Ser Trp Glu Val
 1 5 10 15
 Arg Ala Phe Ala Glu Asp Thr Ser Asn Ile Met Gly Ala Thr Trp Pro
 20 25 30
 Pro Arg Ser Tyr Thr Cys Ser Phe Cys Arg Arg Glu Phe Arg Ser Ala
 35 40 45
 Gln Ala Leu Gly Gly His Met Asn Val His Arg Arg Asp Arg Ala Lys
 50 55 60
 Leu His Gln Ser Gln Phe Arg Pro Leu Ala Asn Gln Asn Ser Pro Phe
 65 70 75 80
 Ala Ser Cys Ser Ser Pro Ser Ser Ser Thr Leu Leu Phe Pro Asn Gln
 85 90 95

<210> 916
 <211> 176
 <212> PRT
 <213> Eucalyptus grandis

<400> 916
 Met Ala Glu Leu Asp Tyr Cys Gln Thr Lys Ser Ser Pro Gly Ala Ala
 1 5 10 15
 Ala Thr Arg Leu Lys Leu Phe Gly Phe Asn Val Ser Asp Glu Glu Asp
 20 25 30
 Ser Ala Val Ser Asp Pro Ile Thr Val Gly Ala Asn Gly Gly Gly Gly
 35 40 45

Gly Gly Gly Gly Lys Ala Thr Pro Ser Gly Ser Pro Glu Gly Ser Val
 50 55 60
 Pro Val Gly Gly Gly Gly Glu Arg Lys Tyr Glu Cys Gln Tyr Cys Cys
 65 70 75 80
 Arg Glu Phe Ala Asn Ser Gln Ala Leu Gly Gly His Gln Asn Ala His
 85 90 95
 Lys Lys Glu Arg Gln Gln Leu Lys Arg Ala Gln Leu His Ala Ser Arg
 100 105 110
 Asn Ala Ala Val Ser Ser Leu Val Arg Asn Pro Ile Ile Ser Ala Phe
 115 120 125
 Ala Thr Pro Pro His Leu Leu Ala Thr Val Gly Pro Val Val Val Thr
 130 135 140
 Gly Ala Ala Pro Thr Ser Pro Ser Trp Val Tyr Val Pro Arg Gly Ala
 145 150 155 160
 Pro Pro Phe Gln Val Ser His Gly Cys Val Phe Thr Thr Gly Gln Gly
 165 170 175

<210> 917
 <211> 138
 <212> PRT
 <213> Eucalyptus grandis

<400> 917
 Glu His Gln Ser Asn Pro Trp His Gln Ser Ser Ser Ala Ala Asn His
 1 5 10 15
 Arg Gln Leu Asn Leu Glu Leu Ala Leu Glu Pro Cys Ser Pro Ser Ser
 20 25 30
 Ser Ser Ser Pro Ala Ser Leu His Pro Leu Ala Val Pro Ala Lys Asp
 35 40 45
 Asn Lys Leu Tyr Ser Cys Asn Phe Cys Gln Lys Lys Phe Tyr Ser Ser
 50 55 60
 Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Leu Glu Arg Thr Leu
 65 70 75 80
 Ala Lys Lys Ser Arg Asp Leu Cys Ser Ala Ala Lys Pro Pro Ala Ala
 85 90 95
 Thr Ser Asn Gly His His Val Arg Pro Ser Phe Gln Ser Val Val Tyr
 100 105 110
 Glu Asn Gln Pro Arg Leu Ala Arg His Val Gly Asp Asp Met Arg Tyr
 115 120 125
 Ala Gly Thr Asn Pro Leu Tyr Gly Ser Ser
 130 135

<210> 918
 <211> 68
 <212> PRT
 <213> Eucalyptus grandis

<400> 918
 Gln Leu Ser Ser Val Asp Arg Glu Ala Arg Val Leu Arg Tyr Arg Glu
 1 5 10 15
 Lys Arg Lys Asn Arg Lys Phe Glu Lys Thr Ile Arg Tyr Ala Ser Arg
 20 25 30
 Lys Ala Tyr Ala Glu Thr Arg Pro Arg Ile Lys Gly Arg Phe Ala Lys
 35 40 45
 Arg Ala Asp Ile Glu Ala Glu Ala Glu Arg Met Phe Gly Phe Gly Val
 50 55 60
 Val Pro Ser Phe

<400> 919

<210> 920

<211> 286

<212> PRT

<213> Eucalyptus grandis

<400> 920

312

Lys Val Leu Arg Glu Leu Asn Ser Leu Ile Ser Gly Ala Pro Pro Ala
 115 120 125
 Asp Asp Ala Val Glu Glu Glu Val Thr Asp Thr Glu Trp Phe Phe Leu
 130 135 140
 Val Ser Met Thr Gln Ser Phe Ala Gly Gly Val Gly Leu Pro Gly Arg
 145 150 155 160
 Ala Tyr Phe Ser Ser Asn Pro Ala Trp Val Thr Gly Ala Glu Arg Leu
 165 170 175
 Gly Asn Cys Gly Cys Asp Arg Ala Arg Gln Ala Gln Ile Phe Gly Leu
 180 185 190
 Gln Thr Ile Ala Cys Val Pro Val Leu Asn Gly Val Val Glu Leu Gly
 195 200 205
 Ser Thr Glu Pro Ile Tyr Gln Ser Ser Asp Leu Ile Ser Gly Ile Arg
 210 215 220
 Gly Leu Phe Asn Phe His Glu Ser Glu Met Gly Cys Gly Gly Arg Val
 225 230 235 240
 Leu Asn Ser Glu His Asp Pro Ala Ser Leu Trp Ile Cys Asp Pro Pro
 245 250 255
 Val Thr Met Glu Ile Asn Asp Arg Pro Met Thr Phe Gln Ile Glu Asn
 260 265 270
 Pro Ser Ser Ser Ser Leu Thr Glu Ser Pro Ser Ala Ile Cys
 275 280 285

<210> 921
 <211> 101
 <212> PRT
 <213> Eucalyptus grandis

<400> 921
 Met Val Pro Pro Phe Pro Thr Ala Glu Leu Pro Leu Asn Glu Asn Asp
 1 5 10 15
 Ser Gln Asp Met Val Ile Tyr His Val Leu Asn Glu Ala Met Ser Gln
 20 25 30
 Asn Asn Ser Ser Leu Pro His Pro Asn Gln Ser Gly Ser Pro Ser Ser
 35 40 45
 Gly Gly Ser Leu Glu Pro Ser Arg Gly Ile Thr Lys Lys His Tyr Arg
 50 55 60
 Gly Val Arg Arg Arg Pro Trp Gly Lys Phe Ala Val Arg Phe Ala Thr
 65 70 75 80
 Arg Tyr Ala Thr Gly Pro Glu Phe Gly Ser Gly His Ser Arg Gln Pro
 85 90 95
 Arg Arg Arg Arg Trp
 100

<210> 922
 <211> 139
 <212> PRT
 <213> Eucalyptus grandis

<400> 922
 Ile Gly Tyr Pro Lys Met Pro Leu Gln Ala Ser Ile Ser Thr Gln Ser
 1 5 10 15
 Asp Phe Gln Ala Asp Gly Ser Gly His Gly Val Pro Ile Pro Gln Gly
 20 25 30
 Ala Asp Ser Gly Ser Leu Gly Ile Ser Ala Leu Pro Thr Ile Gln Arg
 35 40 45
 Asp Ser Gly Val His Val Lys Gln Thr Thr Ser Glu Ser Ser Arg Glu

50		55		60											
Asp	Ser	Asp	Asp	Glu	Glu	Phe	Glu	Gly	Asp	Thr	Gly	Thr	Thr	Glu	Asn
65				70					75					80	
Lys	Asp	Pro	Ala	Glu	Val	Arg	Arg	Ala	Arg	Arg	Met	Gln	Ser	Asn	Arg
			85					90						95	
Glu	Ser	Ala	Arg	Arg	Ser	Arg	Arg	Arg	Lys	Gln	Glu	His	Met	Ser	Glu
		100					105						110		
Leu	Glu	Asn	Gln	Val	Glu	His	Thr	Gly	Leu	Leu	Lys	Arg	Leu	Thr	Asp
	115					120						125			
Met	Asn	Gln	Lys	Tyr	Asp	Val	Ala	Ser	Val	Asp					
130						135									

<210> 923
 <211> 222
 <212> PRT
 <213> Pinus radiata

<400> 923															
Met	Gly	Gln	Gln	Ser	Leu	Ile	Tyr	Ser	Phe	Val	Ala	Arg	Gly	Thr	Val
1				5					10					15	
Val	Leu	Ala	Glu	Tyr	Thr	Glu	Phe	Lys	Gly	Asn	Phe	Thr	Gly	Ile	Ala
		20						25					30		
Ala	Gln	Cys	Leu	Gln	Lys	Leu	Pro	Ala	Ser	Asn	Asn	Lys	Phe	Thr	Tyr
		35					40					45			
Asn	Cys	Asp	Asn	His	Thr	Phe	Asn	Tyr	Leu	Val	Glu	Asp	Gly	Phe	Ala
	50					55					60				
Tyr	Cys	Val	Val	Ala	Asp	Glu	Ser	Val	Gly	Arg	Gln	Val	Pro	Met	Ala
65				70					75					80	
Phe	Leu	Glu	Arg	Val	Lys	Glu	Asp	Phe	Lys	Arg	Arg	Tyr	Gly	Gly	Gly
			85						90					95	
Arg	Ala	Asp	Thr	Ala	Val	Ala	Asn	Ser	Leu	Asn	Arg	Asp	Phe	Gly	Ser
		100						105					110		
Lys	Leu	Lys	Glu	His	Met	Gln	Tyr	Cys	Ile	Asp	His	Pro	Glu	Glu	Ile
	115						120					125			
Ser	Lys	Leu	Ala	Lys	Val	Lys	Ala	Gln	Val	Ser	Glu	Val	Lys	Gly	Val
	130					135					140				
Met	Met	Asp	Asn	Ile	Glu	Lys	Val	Leu	Asp	Arg	Gly	Glu	Lys	Ile	Glu
145				150					155					160	
Leu	Leu	Val	Asp	Lys	Thr	Glu	Asn	Leu	Arg	Phe	Gln	Ala	Gln	Asp	Phe
			165						170					175	
Gln	Lys	Lys	Gly	Thr	Glu	Leu	Arg	Arg	Lys	Met	Trp	Phe	Gln	Asn	Met
		180					185						190		
Lys	Val	Lys	Leu	Ile	Val	Leu	Gly	Ile	Val	Val	Ala	Leu	Ile	Leu	Ile
	195						200					205			
Ile	Val	Leu	Ser	Val	Cys	His	Gly	Phe	Asn	Cys	Ser	Lys	Lys		
210						215					220				

<210> 924
 <211> 105
 <212> PRT
 <213> Pinus radiata

<400> 924															
Met	Gly	Arg	Gly	Lys	Ile	Glu	Ile	Lys	Met	Ile	Glu	Asn	Thr	Ala	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Lys	Gly	Gly	Leu	Leu	Lys	Lys	Ala
	20							25					30		

His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe
 35 40 45
 Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys
 50 55 60
 Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp
 65 70 75 80
 Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu
 85 90 95
 Asn Glu Ser Leu Arg Ala Arg Leu Arg
 100 105

<210> 925
 <211> 102
 <212> PRT
 <213> Pinus radiata

<400> 925
 Val Pro Ser Pro Leu Val Pro Thr Arg Glu Asn Tyr Phe Val Arg Tyr
 1 5 10 15
 Cys Lys Gln His Ser Asp Gly Ile Trp Ala Val Val Asp Val Ser Leu
 20 25 30
 Asp Thr Leu Arg Gly Asn Pro Gln Pro His Pro Asn Cys Pro Pro Ser
 35 40 45
 Thr Leu Arg Cys Arg Arg Arg Pro Ser Gly Cys Leu Ile Gln Glu Met
 50 55 60
 Pro Asn Gly Tyr Ser Lys Val Thr Trp Val Glu His Val Glu Val Asp
 65 70 75 80
 Glu Arg Ala Val His Arg Ile Tyr Asp Lys Leu Val Ser Thr Val Ser
 85 90 95
 Arg Arg Thr Pro Tyr Arg
 100

<210> 926
 <211> 176
 <212> PRT
 <213> Pinus radiata

<400> 926
 Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg
 1 5 10 15
 Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val
 20 25 30
 Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp
 35 40 45
 Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met
 50 55 60
 Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys
 65 70 75 80
 Glu Ser Val Val Thr Ser Gly Gln His Gln His Asn Pro Thr Pro Gln
 85 90 95
 His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu
 100 105 110
 Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp
 115 120 125
 Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile
 130 135 140
 Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly

145 150 155 160
 Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg
 165 170 175

<210> 927
 <211> 68
 <212> PRT
 <213> Pinus radiata

<400> 927
 Ile Leu Pro Glu Gly Pro Pro Glu Ser Arg Ser Val Ile Asp Asn Arg
 1 5 10 15
 Gln Val Glu Gly Ser Ile Leu Thr Ile Ala Phe Gln Ile Leu Val Asn
 20 25 30
 Asp Leu Pro Ser Ala Lys Leu Thr Leu Glu Ser Val Glu Thr Val Asn
 35 40 45
 Asn Leu Ile Ser Cys Thr Ala Gln Arg Ile Lys Ala Ala Leu His Lys
 50 55 60
 Val Glu Asp Val
 65

<210> 928
 <211> 68
 <212> PRT
 <213> Pinus radiata

<400> 928
 Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu
 1 5 10 15
 Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Arg Gly Leu Leu Lys
 20 25 30
 Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val
 35 40 45
 Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu
 50 55 60
 Ser Asn Gly Tyr
 65

<210> 929
 <211> 126
 <212> PRT
 <213> Pinus radiata

<400> 929
 Ile Arg Asn Pro Thr Asn Arg His Ser Ser Phe Tyr Lys Arg Lys Gly
 1 5 10 15
 Gly Leu Leu Lys Lys Ala Phe Glu Leu Ala Val Leu Cys Asp Ala Glu
 20 25 30
 Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Arg Ile Tyr Glu Phe Ala
 35 40 45
 Ser His Asp Asp Val Thr Thr Val Leu Ala Lys Tyr Arg Ile Gln Thr
 50 55 60
 Lys Thr Ala Gly Asn Ala Met Pro Ser Ser Leu Gln Lys Thr Glu Phe
 65 70 75 80
 Asp Gln Leu Gln Val Arg Met Leu Gln Glu Lys Ile Asp Asn Leu Glu
 85 90 95
 Lys Thr Lys Lys His Met Val Gly Glu Asn Leu Glu Ser Leu Thr Trp

			100					105				110	
Lys	Glu	Leu	Gln	Gln	Val	Glu	Lys	Lys	Leu	Ser	Lys	Ala	Thr
		115					120					125	

<210> 930
 <211> 90
 <212> PRT
 <213> Pinus radiata

Leu	Phe	His	Pro	Ala	Arg	Ile	Gly	Gly	Phe	Gly	Gly	Gly	Gln	Val	Ile
1				5					10					15	
Leu	Pro	Leu	Ala	His	Thr	Val	Glu	His	Glu	Glu	Phe	Leu	Glu	Val	Ile
			20					25					30		
Lys	Leu	Glu	Asn	His	Gly	Leu	Thr	Gln	Glu	Glu	Ala	Leu	Leu	Ser	Arg
		35					40					45			
Asp	Met	Phe	Leu	Leu	Gln	Leu	Cys	Ser	Gly	Leu	Asp	Glu	Asn	Ala	Val
	50					55					60				
Gly	Ala	Cys	Ala	Glu	Leu	Val	Phe	Ala	Pro	Ile	Asp	Ala	Ser	Leu	Ala
65					70					75					80
Asp	Ser	Ser	Pro	Leu	Leu	Pro	Ser	Gly	Phe						
				85					90						

<210> 931
 <211> 138
 <212> PRT
 <213> Pinus radiata

Met	Gly	Arg	Gly	Arg	Val	Gln	Leu	Arg	Arg	Ile	Glu	Asn	Lys	Ile	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Tyr	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe
		35					40					45			
Ser	Thr	Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Ala	Ser	Ser	Ser	Met	Asn	Lys
	50					55					60				
Thr	Leu	Glu	Arg	Tyr	Glu	Lys	Cys	Ser	Tyr	Ala	Met	Gln	Asp	Thr	Thr
65					70					75					80
Gly	Val	Ser	Asp	Arg	Glu	Ala	Gln	Asn	Trp	His	Gln	Glu	Val	Thr	Lys
				85					90					95	
Leu	Lys	Gly	Lys	Val	Glu	Leu	Leu	Gln	Arg	Ser	Gln	Arg	His	Leu	Leu
			100					105					110		
Gly	Glu	Asp	Leu	Gly	Pro	Leu	Asn	Val	Lys	Glu	Leu	Gln	Gln	Leu	Glu
		115					120					125			
Arg	Gln	Leu	Glu	Val	Ala	Leu	Thr	His	Leu						
						130			135						

<210> 932
 <211> 161
 <212> PRT
 <213> Pinus radiata

Met	Gly	Gln	Gln	Ser	Leu	Ile	Tyr	Ser	Phe	Val	Ala	Arg	Gly	Thr	Val
1				5					10					15	
Val	Leu	Ala	Glu	Tyr	Thr	Gln	Phe	Thr	Gly	Asn	Phe	Thr	Thr	Ile	Ala

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			20					25					30			
Asn	Gln	Cys	Leu	Gln	Lys	Ile	Pro	Ala	Ser	Asn	Asn	Lys	Phe	Thr	Tyr	
		35					40					45				
Asn	Cys	Asp	Arg	His	Thr	Phe	Asn	Tyr	Leu	Val	Glu	Asp	Gly	Tyr	Thr	
	50					55					60					
Tyr	Cys	Val	Val	Ala	Asp	Glu	Ser	Val	Gly	Arg	Gln	Leu	Pro	Ile	Ala	
65					70				75						80	
Phe	Leu	Glu	Arg	Ile	Lys	Asp	Asp	Phe	Lys	Lys	Arg	Tyr	Gly	Gly	Gly	
			85					90					95			
Lys	Ala	Asp	Thr	Ala	Val	Ala	His	Ser	Leu	Asn	Lys	Asp	Phe	Gly	Pro	
		100						105					110			
Lys	Leu	Lys	Asp	His	Met	Gln	Tyr	Cys	Val	Asp	His	Pro	Glu	Glu	Ile	
		115					120					125				
Asn	Lys	Leu	Ala	Lys	Val	Lys	Ala	Gln	Val	Ser	Glu	Val	Lys	Gly	Val	
	130					135					140					
Met	Met	Glu	Asn	Ile	Glu	Lys	Val	Leu	Asp	Arg	Gly	Glu	Lys	Ile	Glu	
145					150				155						160	
Leu																

<210> 933
 <211> 54
 <212> PRT
 <213> Pinus radiata

Phe	Pro	Thr	Gly	Asn	Gly	Gly	Thr	Ile	Glu	Leu	Leu	Tyr	Met	His	Thr	
1				5				10						15		
Tyr	Ala	Ala	Thr	Thr	Leu	Ala	Ser	Ala	Arg	Asp	Phe	Trp	Thr	Leu	Arg	
		20					25					30				
Tyr	Thr	Thr	Val	Leu	Glu	Tyr	Gly	Ser	Leu	Val	Val	Cys	Glu	Arg	Ser	
		35					40					45				
Leu	Ser	Gly	Thr	Gln	Gly											
50																

<210> 934
 <211> 123
 <212> PRT
 <213> Pinus radiata

Arg	Arg	Glu	Ala	Cys	Cys	Pro	Gln	Pro	Ser	Leu	Met	Ala	Arg	Ala	Pro	
1				5				10						15		
His	His	His	Gln	Gln	Gln	Gln	His	His	Gln	His	His	Gln	Gln	Glu	Ala	
		20					25					30				
Ser	Arg	Met	Val	Thr	Ser	Leu	Glu	Val	Asp	Ile	Asp	Thr	Ala	Cys	Ser	
		35					40					45				
Ser	Lys	Pro	Asn	Asp	Ser	Ile	Asp	Ala	Leu	Lys	Ser	Lys	Ile	Ala	Cys	
	50				55					60						
His	Pro	His	Tyr	Pro	Gln	Leu	Leu	Ala	Ala	Tyr	Met	Asp	Cys	Gln	Lys	
65					70					75					80	
Val	Gly	Ala	Pro	Pro	Glu	Val	Val	Thr	Val	Leu	Asp	Glu	Ile	Ile	Gln	
			85					90					95			
Glu	Asn	Gln	Leu	Gly	Arg	His	Ser	Gly	Thr	Met	Asp	Ile	Gly	Val	Asp	
		100					105						110			
Pro	Glu	Leu	Asp	Gln	Phe	Met	Glu	Ala	Tyr	Cys						
		115					120									

<210> 935
 <211> 113
 <212> PRT
 <213> Pinus radiata

<400> 935
 Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Asp Asp Val Thr Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Lys Met Gly Ile Phe Lys Lys Ala
 20 25 30
 His Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Leu Ile Phe
 35 40 45
 Ser Asn Thr Gly Arg Leu Tyr Asp Tyr Ala Ser Ser Arg Cys Met Glu
 50 55 60
 Arg Thr Ile Glu Arg Tyr Glu Lys Cys Thr Lys Ala Ile Asn Cys Pro
 65 70 75 80
 Thr Ser Asp Pro Ile Val Glu Asn Lys Ser Pro Ile Gln Glu Gly Ile
 85 90 95
 Glu Ile Leu Arg Gln Lys Leu Arg Ala Leu Gln Arg Leu Gln Arg Asn
 100 105 110
 Leu

<210> 936
 <211> 162
 <212> PRT
 <213> Pinus radiata

<400> 936
 Val Gln Glu Val Ala His Ile Ala Asn Gly Ser His Pro Gly Asn Cys
 1 5 10 15
 Ile Ser Leu Leu Arg Val Asn Ala Cys Ser Thr Ser Gln Asn Val Glu
 20 25 30
 Leu Ile Leu Gln Glu Ser Cys Thr Asp Ala Ser Gly Ser Val Ile Val
 35 40 45
 Tyr Ala Pro Val Asp Val Pro Ala Ile Asn Ile Ala Met Ser Gly Glu
 50 55 60
 Asp Pro Ser Tyr Ile Ala Leu Leu Pro Ser Gly Phe Ala Ile Leu Pro
 65 70 75 80
 Asp Gly Gln Asn Arg Ser Ser Thr Ser Ser Leu Leu Glu Gly Ala Asn
 85 90 95
 Ser Ser Ser Asn Ser Ser Asn Ser Ser Gly Leu Asp Ser Pro Leu Thr
 100 105 110
 Arg Gly Gly Ser Leu Leu Thr Val Ala Phe Gln Val Leu Val Ser His
 115 120 125
 Leu Pro Thr Ala Lys Leu Gly Leu Asp Ser Val Thr Thr Ile Asn Asn
 130 135 140
 Leu Ile Cys Asn Thr Val Gln Gln Ile Lys Ser Ala Leu His Cys Ala
 145 150 155 160
 Asp Val

<210> 937
 <211> 114
 <212> PRT
 <213> Pinus radiata

<400> 937

Asn	Arg	Arg	Ala	Arg	Thr	Lys	Trp	Lys	Arg	Asn	Glu	Val	Glu	Cys	Asp
1				5					10					15	
Asn	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu	Arg	Glu	Glu	Asn	Arg	Arg	Leu
			20					25					30		
Glu	Lys	Glu	Val	Gln	Ser	Leu	Arg	Ala	Met	Lys	Val	Pro	Gln	Ser	Pro
			35					40					45		
Asn	Ser	Met	Pro	Leu	Ala	Ala	Ala	Thr	Leu	Ala	Met	Cys	Pro	Ala	Cys
			50				55					60			
Glu	Gly	Leu	Ala	Ile	Lys	Asn	Arg	Gly	Ala	Ala	Thr	Ser	Ser	Thr	Ala
65					70					75					80
Lys	Ser	Gln	Gln	Ser	Leu	Leu	Thr	Ile	Met	Gly	Ile	Gly	Asp	Val	Asn
				85					90					95	
Met	Ile	Ser	Lys	Asn	Asn	Gln	Thr	Pro	Ser	Met	Gly	Met	Gly	Asp	Glu
			100					105						110	
Met	Asn														

<210> 938

<211> 120

<212> PRT

<213> Pinus radiata

<400> 938

Met	Leu	Lys	Thr	Leu	Glu	Arg	Tyr	Gln	Lys	Cys	Ser	Tyr	Val	Leu	Gln
1				5					10					15	
Asp	Ala	Thr	Val	Ser	Asp	Arg	Glu	Ala	Gln	Asn	Trp	His	Gln	Glu	Val
			20					25					30		
Gly	Lys	Leu	Lys	Ala	Lys	Val	Glu	Leu	Leu	Gln	Arg	Ser	Gln	Arg	His
			35				40					45			
Leu	Leu	Gly	Glu	Asp	Leu	Gly	Pro	Leu	Ser	Ile	Lys	Glu	Leu	Gln	Gln
			50			55					60				
Leu	Glu	Arg	Gln	Leu	Glu	Val	Ala	Leu	Thr	His	Val	Arg	Ser	Arg	Lys
65					70					75					80
Thr	Gln	Val	Met	Leu	Glu	Met	Met	Asp	Glu	Leu	Arg	Arg	Lys	Glu	Arg
				85				90						95	
Ile	Leu	Gln	Glu	Val	Asn	Lys	Ser	Leu	Arg	Lys	Lys	Leu	Gln	Glu	Ala
			100					105						110	
Glu	Gly	Gln	Ala	Phe	Asn	Ala	Met								
			115				120								

<210> 939

<211> 110

<212> PRT

<213> Pinus radiata

<400> 939

Ser	Asp	Thr	Ala	Asn	Ser	Ser	Glu	Leu	Leu	Gly	Ser	Ser	Arg	Ser	Asp
1				5					10					15	
Gly	Asp	His	Pro	His	His	Gly	His	His	Asp	Gln	Gln	Gln	Gln	Gln	Gln
			20					25					30		
Glu	Asn	His	Met	Val	Trp	Gln	Asn	Ser	Arg	Leu	Lys	Ala	Asp	Val	Leu
			35				40					45			
Gln	His	Pro	Leu	Tyr	Asp	Gln	Leu	Leu	Ala	Ala	His	Val	Ala	Cys	Leu
			50			55					60				
Arg	Ile	Ala	Thr	Pro	Val	Asp	Gln	Leu	Pro	Lys	Ile	Asp	Ala	Gln	Leu

		35					40					45					
Pro	Arg	Gly	Lys	Val	Tyr	Glu	Phe	Ser	Ser	Thr	Cys	Met	Gln	Lys	Met		
	50					55					60						
Leu	Ala	Arg	Tyr	Glu	Lys	Cys	Ser	Glu	Gly	Ser	Asp	Thr	Ser	Thr	Ser		
65					70					75					80		
Lys	Glu	Gln	Asp	Val	Gln	Cys	Leu	Lys	Arg	Glu	Ser	Ala	Asn	Met	Glu		
			85						90					95			
Glu	Arg	Ile	Glu	Ile	Leu	Glu	Ser	Met	Gln	Arg	Lys	Met	Leu	Gly	Glu		
		100					105						110				
Glu	Leu	Ala	Ser	Cys	Ala	Leu	Lys	Asp	Leu	Asn	Gln	Leu	Glu	Ser	Gln		
	115						120					125					
Val	Glu	Arg	Gly	Leu	Arg												
	130																

<210> 946
 <211> 110
 <212> PRT
 <213> Pinus radiata

Ser	Leu	Val	Trp	Gly	Ala	Leu	Lys	Met	Gly	Lys	Thr	Lys	Met	Glu	Ile		
1				5					10				15				
Lys	Arg	Ile	Gln	Asn	Pro	Ser	Arg	Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg		
			20				25					30					
Lys	Asn	Gly	Leu	Leu	Lys	Lys	Ala	Phe	Glu	Leu	Ser	Val	Leu	Cys	Asp		
	35					40					45						
Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe	Ser	Glu	Thr	Gly	Lys	Ile	Cys	Glu		
	50				55						60						
Phe	Ala	Ser	His	Asp	Asp	Met	Ala	Thr	Ile	Leu	Glu	Lys	Tyr	Arg	Ile		
65				70					75					80			
Tyr	Thr	Glu	Thr	His	Gly	Asn	Met	Glu	Ser	Ser	Ser	Val	Gln	Ser	Val		
			85				90						95				
Lys	Ile	Gly	Glu	Ser	Gln	Leu	Lys	Ala	Leu	Arg	Glu	Lys	Met				
		100					105						110				

<210> 947
 <211> 92
 <212> PRT
 <213> Pinus radiata

Lys	Leu	Pro	Lys	Glu	Ala	Arg	Gln	Lys	Leu	Leu	Asp	Trp	Trp	Thr	Arg		
1				5					10					15			
Asn	Tyr	Lys	Trp	Pro	Tyr	Pro	Ser	Glu	Ser	Gln	Lys	Ile	Ala	Leu	Ala		
			20				25					30					
Glu	Ser	Thr	Gly	Leu	Asp	Gln	Lys	Gln	Ile	Asn	Asn	Trp	Phe	Ile	Asn		
	35					40					45						
Gln	Arg	Lys	Arg	His	Trp	Lys	Pro	Ser	Glu	Glu	Met	Gln	Phe	Val	Val		
	50				55						60						
Met	Asp	Ser	Pro	Asn	Pro	His	Asn	Ala	Ala	Phe	Phe	Leu	Glu	Gly	His		
65				70					75					80			
Leu	Arg	Thr	Asp	Gly	Thr	Ala	Phe	Ser	Met	Asp	Cys						
			85						90								

<210> 948
 <211> 155
 <212> PRT

<213> Pinus radiata

<400> 948

Phe Ser Cys Val Ser Lys Ala Ala Met Ile Leu Ala Glu His Ser Glu
1 5 10 15
Gly Asp Ala Glu Leu Glu Glu Val Ala Gly Glu Cys Leu Glu Arg Val
20 25 30
Pro Pro Leu His Ser Arg Phe Thr His Thr Thr Lys Arg Lys Met Tyr
35 40 45
Ser Phe Leu Met Asp Gly Pro Phe Val Tyr Cys Ala Ile Val Asp Glu
50 55 60
Ala Leu Gly Lys Pro Gln Val Phe Val Phe Leu Glu His Val Arg Asp
65 70 75 80
Glu Phe Lys Lys Leu Leu Lys Asn Arg Gly Cys Glu Gly Leu Ser Ser
85 90 95
Cys Cys Phe Asp Lys Glu Phe Gly Pro Val Tyr Lys Arg Leu Val Ala
100 105 110
Pro Leu Val Gly Val Pro Gln Ile Glu Lys Asp Arg Leu Met Glu Glu
115 120 125
Glu Ser Lys Ser Gln Pro Ala Lys Thr His Pro Val Gln Val Asn Asn
130 135 140
Ser Pro Lys Asp Ser Leu Pro Val Tyr Asp Asn
145 150 155

<210> 949

<211> 165

<212> PRT

<213> Pinus radiata

<400> 949

Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln Gly
1 5 10 15
Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu Leu
20 25 30
Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu Val
35 40 45
Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu Ala
50 55 60
Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Phe Ala Gln Lys Met Thr
65 70 75 80
Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met Ile
85 90 95
Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr Ser
100 105 110
Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro Asp
115 120 125
Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr Ile
130 135 140
Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile Ala
145 150 155 160
Tyr Val Asn Ser Met
165

<210> 950

<211> 153

<212> PRT

<213> Pinus radiata

50		55		60												
Ile	Leu	Glu	Lys	Tyr	Lys	Lys	Arg	Ser	Lys	Glu	Asn	Gly	Met	Ala	Gln	
65					70					75					80	
Thr	Thr	Lys	Glu	Gln	Asp	Thr	Gln	Tyr	Ser	Lys	His	Ser	Lys	Gln	Lys	
				85					90					95		
Leu	Ala	Asn	Met	Glu	Glu	Gln	Ile	Arg	Ile	Leu	Glu	Ser	Thr	Gln	Arg	
			100					105					110			
Lys	Met	Leu	Gly	Glu	Gly	Leu	Glu	Ser	Cys	Ser	Met	Ala	Glu	Leu	Asn	
	115						120					125				
Lys	Leu	Glu	Ser	Gln	Ala	Glu	Arg	Gly	Leu	Ser	His	Ile	Arg	Ala	Arg	
	130					135					140					
Lys	Thr	Glu	Ile	Leu	Val	Asp	Gln	Ile	Glu	Cys	Leu	Lys	Arg	Lys	Glu	
145					150					155					160	
Arg	Leu	Leu	Ser	Glu	Asn	Ala	Leu	Leu	Ser	Arg	Lys	Trp	Val	Asp		
			165					170					175			
Arg	Gln	Ser	Val	Asp	Gly	Ser	Gly	Ser	Thr	Ser	Ser	Ser	Ile	Gly	Leu	
		180					185						190			
Gly	Ser	Ile	Glu	Gln	Ile	Glu	Val	Glu	Thr	Gln	Leu	Val	Ile	Arg	Pro	
	195					200						205				
Pro	Asn	Ala	Gln	Asp	His	Cys	Ser	Val								
	210					215										

<210> 953
 <211> 183
 <212> PRT
 <213> Pinus radiata

<400>	953															
Met	Glu	Ser	Glu	Glu	Asp	Lys	Ile	Ser	Pro	Glu	Asn	Lys	Lys	Arg	Arg	
1			5						10					15		
Leu	Lys	Thr	Pro	Gln	Gln	Val	Glu	Gly	Leu	Glu	Ser	Phe	Tyr	Ala	Glu	
			20					25					30			
His	Lys	Tyr	Pro	Ser	Glu	Ala	Met	Lys	Ser	Gln	Leu	Ser	Glu	Glu	Leu	
	35						40					45				
Gly	Leu	Thr	Glu	Lys	Gln	Val	Gln	Gly	Trp	Phe	Cys	His	Arg	Arg	Leu	
	50				55						60					
Lys	Asp	Lys	Arg	Leu	Met	Lys	Glu	Glu	Ala	Ser	Asn	Asn	Gly	Lys	Gln	
65					70				75						80	
Asp	Pro	His	Asn	Gly	Ile	Met	Gln	Asp	Ser	Val	Asn	Gly	Val	Lys	Gln	
			85					90					95			
Asp	Ser	Ser	Gly	Ser	Gly	Lys	Lys	Ser	Asp	His	Gln	Arg	His	Ser	Arg	
	100						105						110			
Cys	Lys	Glu	Val	Glu	Ser	Gln	Arg	Phe	Ala	Asn	Ala	Met	Asp	Tyr	Pro	
	115						120					125				
Ala	Ala	Val	Leu	Ala	Ser	Glu	Leu	Arg	Asp	His	Asp	Leu	Phe	Lys	Val	
	130					135					140					
Asn	His	Asp	Asn	Glu	Asp	Thr	Phe	Ala	Gly	Ser	Ser	Ser	Ala	Ser	Gln	
145				150						155					160	
Asp	Arg	Ser	Ser	Leu	Gln	Ser	Gly	Asn	Pro	Tyr	Glu	Ala	Glu	Ala	Arg	
			165					170						175		
Arg	Arg	Pro	Phe	Gln	Asn	Gly										
	180															

<210> 954
 <211> 105
 <212> PRT
 <213> Pinus radiata

115

<210> 957
 <211> 90
 <212> PRT
 <213> Pinus radiata

<400> 957
 Gln Leu Leu Phe His Leu Arg Ser Gln Ser Ile Ser Pro Leu Val Thr
 1 5 10 15
 Cys Leu Arg Ser His Arg Ala Pro Pro Trp Pro Thr Pro Ile Ser Trp
 20 25 30
 Leu Cys Ile Ile Arg Val Met Thr Glu Glu Gln Met Glu Thr Leu
 35 40 45
 Arg Arg Gln Ile Cys Val Tyr Ser Thr Ile Gly Ser Gln Leu Val Glu
 50 55 60
 Met His Arg Ala Met Ser Gln Gln Gln Ala Phe Phe Ser Gly Arg Leu
 65 70 75 80
 Cys Leu Trp Asp Asn Thr Cys Phe Met Ile
 85 90

<210> 958
 <211> 103
 <212> PRT
 <213> Pinus radiata

<400> 958
 Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Tyr Gly Ile
 50 55 60
 Glu Ile Ser Gly Leu Phe Ser Gly Ile Leu Tyr Tyr Asn Ile Arg Val
 65 70 75 80
 Gly Glu Gly Cys Glu Gly Glu Lys Arg Gly Cys Lys Val Tyr Ser Val
 85 90 95
 Ile Cys Phe Lys Gly Lys Ser
 100

<210> 959
 <211> 63
 <212> PRT
 <213> Pinus radiata

<400> 959
 Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser
 1 5 10 15
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe
 35 40 45
 Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu
 50 55 60

<210> 960
 <211> 60
 <212> PRT
 <213> Pinus radiata

<400> 960
 Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg
 1 5 10 15
 Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser
 20 25 30
 Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly
 35 40 45
 Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His
 50 55 60

<210> 961
 <211> 52
 <212> PRT
 <213> Pinus radiata

<400> 961
 Thr Ser Arg Leu His Phe Val Asp Gln Gln Leu Arg Gln Gln Arg Ala
 1 5 10 15
 Leu Gln Gln Leu Gly Met Ile Gln Gln His Ala Trp Arg Pro Gln Arg
 20 25 30
 Gly Leu Pro Glu Arg Ala Val Ser Ile Leu Arg Ala Trp Leu Phe Glu
 35 40 45
 His Phe Leu His
 50

<210> 962
 <211> 154
 <212> PRT
 <213> Pinus radiata

<400> 962
 Ala Val Val Ile Trp Met Gly Asp Pro Glu Arg Thr Lys Met Pro Pro
 1 5 10 15
 Ile Lys Ile Thr Ile Thr Ile Thr Ile Met Ile Thr Ser Ser Ser Arg
 20 25 30
 Arg Gly Gly Asn Val Thr Thr Asp Thr Leu Leu Val Lys Phe Arg Arg
 35 40 45
 Trp Lys Arg Cys Leu Arg Ser Val His Ile Leu Met Thr Asn Lys Gly
 50 55 60
 Ser Gly Ser Ala Leu Asn Trp Ala Leu Lys Pro Arg Gln Val Lys Phe
 65 70 75 80
 Trp Phe Gln Asn Arg Arg Thr Gln Met Lys Ala Gln Gln Asp Arg Ser
 85 90 95
 Asp Asn Ala Ile Leu Arg Ala Glu Asn Glu Asn Leu Arg Asn Glu Asn
 100 105 110
 Val Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly
 115 120 125
 Gly Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe
 130 135 140
 Arg Ile Glu Asn Thr Arg Leu Lys Glu Glu
 145 150

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<210> 964
<211> 123
<212> PRT
<213> Pinus radiata
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<210> 965
<211> 71
<212> PRT
<213> Pinus radiata
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330

130

135

<210> 970

<211> 128

<212> PRT

<213> Pinus radiata

<400> 970

Arg	Gly	Arg	Val	Gln	Leu	Arg	Arg	Ile	Glu	Asn	Lys	Ile	Ser	Arg	Gln
1				5					10					15	
Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Met	Lys	Lys	Ala	Ala	Glu
			20				25						30		
Leu	Ser	Ile	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Val	Phe	Ser	Asn
		35					40					45			
Lys	Asp	Lys	Leu	Tyr	Glu	Phe	Ala	Ser	Ser	Ser	Met	Thr	Lys	Ile	Leu
50					55						60				
Glu	Arg	Tyr	Arg	Lys	Arg	Ser	Asn	Leu	Ile	Gln	Asp	Ile	Gly	Lys	Asp
65				70					75						80
Pro	Gln	Asn	Ser	Asp	Ile	Glu	Leu	Thr	Arg	Leu	Lys	Glu	Glu	Val	Asp
				85				90						95	
Arg	Leu	Gln	Arg	Ser	Arg	Arg	His	Leu	Leu	Gly	Glu	Asp	Leu	His	Gln
			100				105						110		
Leu	Gly	Ala	Thr	Asp	Leu	Gln	His	Leu	Glu	Gln	Gln	Leu	Glu	Glu	Ala
		115				120						125			

<210> 971

<211> 147

<212> PRT

<213> Pinus radiata

<400> 971

Met	Asp	Ser	Phe	Glu	Ala	Lys	Gly	Lys	Gly	Glu	Lys	Arg	Arg	Thr	Val
1				5					10					15	
Arg	Gly	Lys	Thr	Gln	Met	Lys	Arg	Ile	Glu	Asn	Ala	Thr	Ser	Arg	Gln
			20				25						30		
Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala	Tyr	Glu
		35					40					45			
Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Met	Val	Phe	Ser	Pro
50				55							60				
Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Ala	Asn	Pro	Ser	Met	Gln	Lys	Met	Leu
65				70					75						80
Glu	Arg	Tyr	Glu	Lys	Cys	Ser	Glu	Gly	Ser	Lys	Thr	Thr	Ser	Ile	Ala
			85				90						95		
Lys	Glu	Glu	Asp	Pro	Lys	Ala	Leu	Lys	Arg	Glu	Ile	Ala	Asn	Met	Glu
			100				105						110		
Glu	Arg	Ile	Glu	Ile	Leu	Glu	Arg	Thr	Gln	Arg	Lys	Met	Leu	Gly	Glu
		115				120						125			
Glu	Leu	Ala	Ser	Cys	Ala	Leu	Lys	Asp	Leu	Asn	Gln	Leu	Glu	Ser	Gln
	130					135					140				
Val	Glu	Arg													
145															

<210> 972

<211> 45

<212> PRT

<213> Pinus radiata

<400> 972
 Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser Lys Gly Gln Leu
 1 5 10 15
 Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln Val Glu Thr Leu
 20 25 30
 Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr Ser
 35 40 45

<210> 973
 <211> 97
 <212> PRT
 <213> Pinus radiata

<400> 973
 Met Gly Ala Phe Ala Leu Leu Ser Ser Trp Ile Asp Ala Ala Thr Asn
 1 5 10 15
 Pro Lys Tyr Arg Lys Lys Arg Lys Gln Phe Gln Thr Val Glu Leu Arg
 20 25 30
 Val Arg Met Asp Cys Glu Gly Cys Glu Arg Lys Val Arg Asn Ala Leu
 35 40 45
 Asn Ser Met Lys Gly Val Ser Ser Val Glu Val Glu Arg Lys Gln Tyr
 50 55 60
 Lys Ala Thr Val Thr Gly Tyr Val Asp Ala Asn Lys Val Leu Lys Arg
 65 70 75 80
 Val Arg Gln Thr Gly Lys Lys Ala Glu Leu Trp Pro Tyr Lys Pro Tyr
 85 90 95
 His

<210> 974
 <211> 135
 <212> PRT
 <213> Pinus radiata

<400> 974
 Phe Ser Asn Thr Trp Phe Ser Gly Asn Leu Leu Ala Pro Gly Ala Asn
 1 5 10 15
 Lys Gln Met His Leu Asp Ser Ser Ser Thr Gly Ala Pro Gly Leu Ser
 20 25 30
 Asn Val Leu Ile Gly Ser Lys Tyr Leu Lys Ala Ala Gln Gln Leu Leu
 35 40 45
 Asp Glu Val Val Asn Val Gly Lys Gly Ile Lys Pro Asp Ser Ala Lys
 50 55 60
 His Gln Lys Ser Gln Ser Trp Ile Gly Thr Thr Ala Asn Lys Glu Asn
 65 70 75 80
 Ser Gly Ala Glu Gly Gly Lys Asp Gly Ala Ala Ala Pro Thr
 85 90 95
 Trp Arg Ser Thr Ser Ala Gln Glu Thr Asn Asp Arg Pro Ser Glu Leu
 100 105 110
 Ser Pro Ala Glu Arg Gln Glu Leu Gln Met Lys Lys Ala Lys Leu Val
 115 120 125
 Ala Met Leu Asp Glu Val Asp
 130 135

<210> 975
 <211> 93
 <212> PRT

<213> Pinus radiata

<400> 975

Tyr	Ser	Glu	Val	Arg	Thr	Arg	Ala	Arg	Phe	Trp	Arg	Arg	Lys	Gly	Arg
1				5					10					15	
Val	Arg	Arg	Phe	Lys	Tyr	Thr	Cys	Lys	Ser	Ala	Gly	His	Pro	Ser	Ile
			20					25					30		
Arg	Lys	Arg	Ile	Lys	Asp	Gly	Lys	Gly	Gln	Pro	Cys	Arg	Gln	Tyr	Thr
			35				40					45			
Pro	Cys	Gly	Cys	Gln	Leu	Thr	Cys	Gly	Lys	Gln	Cys	Pro	Cys	Leu	Arg
			50			55					60				
Asn	Gly	Thr	Cys	Cys	Glu	Lys	Tyr	Cys	Gly	Cys	Ser	Lys	Ser	Cys	Lys
65					70					75					80
Asn	Arg	Phe	Arg	Gly	Cys	His	Cys	Ala	Lys	Ser	Gln	Cys			
				85					90						

<210> 976

<211> 114

<212> PRT

<213> Pinus radiata

<400> 976

Ala	Asp	Glu	Ser	Leu	Trp	Ile	Pro	Asn	Leu	Asp	Ala	Gly	Lys	Glu	Thr
1				5					10					15	
Leu	Ser	Tyr	Glu	Glu	Tyr	Met	Arg	Gln	Phe	Pro	Ser	Thr	Ile	Thr	Pro
			20					25					30		
Lys	Pro	Ile	Gly	Leu	Ala	Thr	Glu	Ala	Thr	Arg	Glu	Thr	Gly	Met	Val
			35				40					45			
Ile	Thr	Asn	Ser	Leu	Asn	Leu	Val	Glu	Thr	Leu	Met	Asp	Val	Asp	His
			50			55					60				
Trp	Lys	Glu	Met	Phe	Pro	Cys	Met	Ile	Ser	Arg	Ala	Ala	Thr	Val	Asp
65					70					75					80
Val	Ile	Ser	Ser	Gly	Met	Gly	Gly	Thr	Arg	Asn	Gly	Ala	Leu	Gln	Leu
				85				90						95	
Met	Tyr	Ala	Glu	Leu	Gln	Val	Leu	Ser	Pro	Leu	Val	Pro	Ala	Arg	Glu
			100					105					110		
Tyr	Phe														

<210> 977

<211> 148

<212> PRT

<213> Pinus radiata

<400> 977

Gln	Ser	Glu	Asn	Ile	Met	Ser	Thr	Arg	Ile	Pro	Ser	Ser	Phe	Ser	Ser
1				5					10					15	
Phe	His	Gly	His	Ala	Asp	Cys	Leu	Leu	Ser	Ala	Ala	Met	Phe	Gln	Gly
			20					25					30		
Ser	Gln	Gly	Asp	His	Lys	Leu	Asn	Pro	Gln	Pro	Gly	Met	Asn	Gln	Gln
			35				40					45			
Leu	Val	Ser	Glu	Gln	Ser	Ile	Met	Ser	Asp	Ser	Ser	Met	Pro	Phe	Val
			50			55					60				
Lys	Thr	Lys	Ala	Cys	Ser	Gly	Leu	Arg	Asn	Gln	Phe	Glu	Phe	His	Arg
65					70					75					80
Glu	Gln	Pro	Gly	Asn	Cys	Tyr	Thr	Asp	Gln	Ser	Ser	Asn	Ile	Pro	Leu
				85					90					95	

				165					170					175			
Lys	Leu	His	Asp	Ser	Asp	His	Glu	Ala	Leu	Thr	Lys	Asp	Ser	Glu	Ser		
			180					185					190				
Ala	Asp	Lys	Lys	Val	Tyr	Pro	Gln	Pro	Ala	Ser	His	Ser	Asp	Cys	Val		
		195					200						205				
Gly	Glu	Pro	Glu	Arg	Ser	Thr	Ala	Ala	Lys	Asp	Thr	Pro	Pro	Gly	Cys		
	210					215					220						
Lys	His	Glu	Asp	Leu	Leu	Ser	Ser	Gly	Thr	Asp	Ser	Ser	Gly	Val	Leu		
225					230					235					240		
Asp	Glu	Asp	Ser	Pro	His	His	Val	Asp	Cys	Gly							
				245					250								

<210> 980
 <211> 128
 <212> PRT
 <213> Pinus radiata

Lys	Ile	Glu	Asn	Thr	Thr	Ser	Arg	Gln	Val	Thr	Phe	Cys	Lys	Arg	Lys		
1				5				10						15			
Asn	Gly	Leu	Leu	Lys	Lys	Ala	Tyr	Glu	Leu	Ser	Leu	Leu	Cys	Asp	Ala		
		20						25					30				
Glu	Val	Ala	Leu	Leu	Ile	Phe	Ser	Thr	Ser	Gly	Arg	Leu	Tyr	Glu	Phe		
		35				40						45					
Ala	Asn	Lys	Ser	Val	Ser	Ala	Thr	Thr	Glu	Arg	Tyr	Met	Arg	Thr	Tyr		
	50				55						60						
Ala	Glu	Asn	Met	Pro	Gln	Ser	Arg	Ala	Leu	Tyr	Pro	Asp	Cys	His	His		
65					70					75				80			
Trp	Gln	Glu	Glu	Val	Arg	Lys	Leu	Thr	Gln	Gln	Arg	Asp	Ser	Leu	Thr		
			85					90						95			
Asn	Ser	Ile	Arg	Gln	Ile	Met	Gly	Glu	Gly	Leu	Glu	Ser	Leu	Ser	Met		
		100					105						110				
Lys	Glu	Leu	Lys	His	Ile	Gln	Val	Gln	Leu	Glu	Lys	Ser	Ile	Ser	Cys		
	115					120						125					

<210> 981
 <211> 119
 <212> PRT
 <213> Pinus radiata

Tyr	Thr	Ala	Glu	Gln	Val	Glu	Ala	Leu	Glu	Arg	Leu	Tyr	Asn	Asp	Cys		
1				5				10						15			
Pro	Lys	Pro	Ser	Ser	Leu	Arg	Arg	Gln	Gln	Leu	Ile	Arg	Glu	Cys	Pro		
		20						25					30				
Ile	Leu	Ser	His	Ile	Glu	Pro	Lys	Gln	Ile	Lys	Val	Trp	Phe	Gln	Asn		
		35					40					45					
Arg	Arg	Cys	Arg	Glu	Lys	Gln	Arg	Lys	Glu	Ala	Ser	Arg	Leu	Gln	Thr		
	50				55						60						
Val	Asn	Arg	Lys	Leu	Thr	Ala	Met	Asn	Lys	Leu	Leu	Met	Glu	Glu	Asn		
65					70				75					80			
Asp	Arg	Leu	Gln	Lys	Gln	Val	Ser	Gln	Leu	Val	Tyr	Glu	Asn	Gly	Tyr		
			85					90						95			
Phe	Arg	Gln	Gln	Ile	Gln	Thr	Val	Ser	Ile	Thr	Thr	Thr	Asp	Thr	Ser		
		100					105						110				
Cys	Glu	Ser	Val	Val	Thr	Ser											
	115																

<210> 982
 <211> 85
 <212> PRT
 <213> Pinus radiata

<400> 982
 Lys His Glu Phe Asp Val Arg Tyr Gln Lys Leu Glu Asp Lys Leu Tyr
 1 5 10 15
 Ile Ala Gln Leu Tyr Phe Pro Leu Ile Gly Leu Ile Leu Asp Glu Met
 20 25 30
 Pro Val Phe Tyr Asn Leu Ser Thr Val Glu Lys Arg Glu Val Leu Ile
 35 40 45
 Cys Ile Met Gln Ile Ile Arg Asn Leu Asp Asp Pro Ser Leu Ile Lys
 50 55 60
 Ala Trp Gln Gln Ser Ile Ala Arg Thr Arg Leu Phe Phe Lys Leu Leu
 65 70 75 80
 Glu Glu Cys Leu Val
 85

<210> 983
 <211> 96
 <212> PRT
 <213> Pinus radiata

<400> 983
 Gly Leu Leu Val Thr Met Arg Leu Phe Ala Ala Thr Glu Pro Lys Arg
 1 5 10 15
 Val Phe Ala Val Thr Lys Arg Ile Phe Leu Leu Gly Phe Val Ser Phe
 20 25 30
 Phe Leu Arg Glu Gly Leu Val Ala Ser Val Trp Leu Pro Val Ser Pro
 35 40 45
 Gln Arg Leu Phe Asp Phe Leu Arg Asp Glu Arg Leu Arg Ser Lys Trp
 50 55 60
 Asp Ile Leu Ser Asn Gly Gly Pro Met Gln Glu Met Ala His Ile Pro
 65 70 75 80
 Lys Gly Gln Asp Pro Arg Asn Cys Val Ser Leu Leu Arg Ala Ser Ile
 85 90 95

<210> 984
 <211> 109
 <212> PRT
 <213> Pinus radiata

<400> 984
 Leu Val Ser Leu Tyr Asn Asn His Leu Asn Gly Ile Leu Ala Asp Glu
 1 5 10 15
 Met Gly Leu Gly Lys Thr Val Gln Val Ile Ser Leu Ile Cys Tyr Leu
 20 25 30
 Met Glu Gln Lys Asn Asp Arg Gly Pro Phe Leu Val Val Val Pro Ser
 35 40 45
 Ser Val Leu Ser Gly Trp Leu Ser Glu Ile Ser Phe Trp Ala Pro Ser
 50 55 60
 Ile Ser Lys Ile Ala Tyr Thr Gly Ser Pro Asp Asp Arg Arg Arg Leu
 65 70 75 80
 Phe Arg Glu Asn Ile Ser Gln Gln Lys Phe Asn Val Leu Leu Thr Thr
 85 90 95

Tyr Glu Tyr Leu Met Asn Lys Arg Ser Thr Lys Thr Glu
100 105

<210> 985
<211> 52
<212> PRT
<213> Pinus radiata

<400> 985
Pro Lys Asp Ala Asp Lys His Met Leu Ala Arg Gln Ala Gly Leu Thr
1 5 10 15
Arg Ser Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp
20 25 30
Lys Pro Met Val Glu Glu Ile Tyr Met Glu Glu Ile Lys Glu Ala Glu
35 40 45
Leu Gly His Ser
50

<210> 986
<211> 101
<212> PRT
<213> Pinus radiata

<400> 986
Gln Gln Asp Asp Asp Ala Lys Val Tyr Glu Ser Pro Leu Arg Arg Lys
1 5 10 15
Asn Ala Glu Ala Pro Arg Thr Arg Trp Arg Phe Leu Pro Leu Glu Ser
20 25 30
Ala Leu Glu Asn Pro Tyr Gln Gly Leu Met Lys His Cys Thr Ser Leu
35 40 45
Leu Lys Thr Leu Met Asn His Lys Phe Gly Tyr Val Phe Asn Glu Pro
50 55 60
Val Asp Pro Val Ala Leu Gly Val Pro Asp Tyr Phe Thr Val Ile Thr
65 70 75 80
Ser Pro Met Asp Leu Gly Thr Ile Lys Ala Lys Leu Gln Asp Ser Val
85 90 95
Tyr Ser Ser Pro Leu
100

<210> 987
<211> 230
<212> PRT
<213> Pinus radiata

<400> 987
Cys Thr Gly Val Ala Ala Arg Ala Cys Gly Phe Ala Gly Leu Glu Pro
1 5 10 15
Ser Lys Val Ala Asp Ile Leu Lys Asp Arg Pro Ala Trp Leu His Asp
20 25 30
Cys Arg Arg Leu Asp Val Leu Thr Ala Phe Pro Thr Gly Lys Gly Gly
35 40 45
Ala Val Glu Leu Leu Tyr Thr Gln Met Tyr Ala Pro Thr Thr Leu Ala
50 55 60
Pro Ala Arg Asp Leu Leu Thr Leu Arg Tyr Thr Ser Leu Leu Glu Asp
65 70 75 80
Gly Ser Leu Val Val Cys Glu Arg Ser Leu Thr Gly Thr Gln Ser Gly
85 90 95

Pro	Asn	Met	Pro	Pro	Val	Gln	His	Phe	Val	Arg	Ala	Gln	Met	Leu	Pro
			100					105					110		
Ser	Gly	Tyr	Leu	Ile	Arg	Pro	Cys	Glu	Gly	Gly	Gly	Cys	Ile	Ile	His
		115					120					125			
Ile	Val	Asp	His	Met	Asp	Leu	Glu	Pro	Trp	Ser	Val	Pro	Glu	Val	Ile
		130				135					140				
Arg	Pro	Leu	Tyr	Glu	Ser	Ser	Ala	Val	Leu	Ala	Gln	Lys	Met	Thr	Ile
145					150					155					160
Thr	Ala	Leu	Arg	His	Leu	Arg	Gln	Val	Ala	Gln	Glu	Val	Ser	Gly	Glu
				165					170					175	
Val	Val	Leu	Gly	Trp	Gly	Arg	Gln	Pro	Ala	Ala	Leu	Arg	Ala	Phe	Ser
			180					185					190		
Gln	Arg	Leu	Cys	Arg	Gly	Phe	Asn	Asp	Ala	Val	Asn	Gly	Phe	Ala	Asp
		195					200				205				
Asp	Gly	Trp	Ser	Leu	Leu	Gly	Ser	Asp	Gly	Val	Glu	Asp	Val	Ile	Ile
	210					215					220				
Ala	Ile	Asn	Ser	Ser	Pro										
225					230										

<210> 988

<211> 164

<212> PRT

<213> Pinus radiata

<400> 988

Gln	Tyr	Leu	Arg	Gln	Gln	Leu	Gln	Leu	Leu	His	Ala	Arg	Ala	Gly	Asn
1				5					10					15	
Asn	Thr	Arg	Ser	Leu	Gln	Gln	Met	Ala	Val	Thr	Ala	Asn	Asp	Thr	Ser
			20					25					30		
Ser	Asp	Ser	Val	Val	Thr	Ser	Gly	Gln	Arg	Gln	Gln	His	Ser	Pro	Gln
		35					40					45			
His	Pro	Pro	Tyr	Ser	Val	Ser	Thr	Ser	Arg	Leu	Phe	Phe	Ile	Ala	Glu
		50				55					60				
Glu	Thr	Leu	Thr	Glu	Phe	Leu	Ala	Lys	Ala	Thr	Gly	Thr	Ala	Val	Asp
65					70					75					80
Trp	Ile	Gln	Met	Pro	Gly	Met	Lys	Pro	Gly	Pro	Asp	Ser	Ile	Gly	Val
			85						90					95	
Val	Ala	Val	Ala	His	Ala	Cys	Gly	Gly	Val	Ala	Val	Gln	Ala	Trp	Gly
			100					105					110		
Val	Val	Ser	Leu	Glu	Pro	Ser	Glu	Val	Ala	Glu	Ala	Leu	Arg	Asp	Lys
		115					120					125			
Val	Ser	Trp	Leu	Cys	Asp	Cys	Arg	Lys	Met	Glu	Val	Leu	Gly	Thr	Phe
	130					135					140				
Asp	Ser	Thr	Asp	Gly	Arg	Lys	Leu	Glu	Leu	Leu	His	Thr	Gln	Met	Tyr
145					150					155					160
Ala	Pro	Ile	Thr												

<210> 989

<211> 107

<212> PRT

<213> Pinus radiata

<400> 989

Met	Gly	Lys	Thr	Lys	Met	Glu	Met	Lys	His	Ile	Gln	Asn	Pro	Ser	Arg
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Lys	Asn	Gly	Leu	Leu	Lys	Lys	Ala

			20					25				30			
Phe	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe
		35					40					45			
Ser	Glu	Thr	Gly	Lys	Ile	Ser	Glu	Phe	Ala	Ser	His	Asn	Asp	Met	Ala
	50					55					60				
Thr	Ile	Leu	Glu	Lys	Tyr	Arg	Ile	Tyr	Thr	Gln	Thr	Glu	Thr	Asp	Gly
65					70					75					80
Asn	Met	Gly	Ala	Ser	Ser	Val	Gln	Ser	Val	Lys	Gly	Trp	Phe	Pro	Asn
			85						90					95	
Phe	Leu	Glu	Ile	Ala	Gly	Phe	Ser	Val	Cys	Gly					
			100					105							

<210> 990

<211> 68

<212> PRT

<213> Pinus radiata

<400> 990

Met	Gly	Arg	Gly	Pro	Val	Gln	Leu	Arg	Arg	Ile	Glu	Asn	Lys	Ile	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Ile	Lys	Lys	Ala
			20					25					30		
Ser	Glu	Leu	Ser	Ile	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Val	Phe
		35				40					45				
Ser	Asn	Lys	Gly	Lys	Leu	Tyr	Glu	Phe	Ser	Ser	Ser	Ser	Met	Thr	Lys
	50					55					60				
Ile	Leu	Glu	Arg												
65															

<210> 991

<211> 230

<212> PRT

<213> Pinus radiata

<400> 991

Leu	Ser	Leu	Ser	Pro	Gln	Gln	Leu	Ser	Asn	Ile	Gln	Leu	Ser	Cys	Phe
1				5					10					15	
Gln	Asn	Gln	Pro	Thr	Asp	Ser	Glu	Val	Asn	Cys	Pro	Ser	Ile	Ser	Glu
			20					25					30		
Ala	Thr	Ser	Gln	Glu	Asn	Leu	Asn	Arg	Ser	Asp	Arg	Leu	Thr	Ser	Lys
		35				40					45				
Leu	Ser	Gly	Ser	Leu	Ser	Ser	Phe	Arg	Ala	Ser	Ser	Arg	Asp	Gly	Met
	50					55					60				
Leu	Gly	Thr	Lys	Phe	Leu	Gly	Ser	Val	Asn	Gly	Pro	Glu	Cys	Asn	Lys
65					70					75					80
Pro	Met	His	His	Gly	Thr	Asn	Ala	Ile	Gly	Ala	Ala	Glu	Leu	Ser	Asn
			85						90					95	
Thr	Leu	Thr	Gly	Ser	Lys	Tyr	Phe	Lys	Ala	Ala	Gln	Gln	Leu	Leu	Asp
			100					105					110		
Glu	Val	Val	Asn	Val	Gly	Lys	Gly	Ile	Lys	Ser	Asp	Ser	Val	Asn	His
		115					120					125			
Gln	Lys	Ser	Gln	Thr	Trp	Phe	Gly	Ala	Ile	Ser	Asp	Lys	Lys	Asn	Ile
	130					135					140				
Ala	Thr	Glu	Ala	Thr	Thr	Asn	Asp	Arg	Thr	Thr	Ser	Ala	Ile	Thr	Gly
145					150					155					160
Ala	Ser	Ile	Ser	Ala	Glu	Val	Met	Lys	Asn	Glu	His	Ala	Phe	Gly	Leu
				165					170					175	

Thr	Pro	Ala	Asp	Arg	Gln	Glu	Leu	Gln	Met	Lys	Lys	Ala	Lys	Leu	Val
			180					185					190		
Ala	Met	Leu	Asp	Glu	Val	Asp	Arg	Arg	Tyr	Arg	Gln	Tyr	Tyr	His	Gln
		195					200					205			
Met	Gln	Ile	Val	Val	Ser	Ser	Phe	Glu	Thr	Ala	Ala	Gly	Phe	Gly	Ala
	210					215						220			
Ala	Lys	Thr	Tyr	Thr	Ser										
225					230										

<210> 992
 <211> 76
 <212> PRT
 <213> Pinus radiata

<400> 992

Met	Gly	Arg	Gly	Lys	Ile	Glu	Leu	Lys	Lys	Ile	Glu	Ser	Thr	Ser	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Met	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Gln	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Gly	Val	Ile	Ile	Phe
		35					40					45			
Ser	Asn	Thr	Gly	Arg	Leu	Tyr	Asp	Phe	Ser	Ser	Ser	Ser	Met	Glu	Lys
	50					55						60			
Met	Ile	Glu	Thr	Tyr	Tyr	Arg	Phe	Ile	Glu	Lys	Asn				
65					70					75					

<210> 993
 <211> 77
 <212> PRT
 <213> Pinus radiata

<400> 993

Val	Thr	Leu	Phe	Leu	Val	Leu	Gln	Val	Leu	Asp	Arg	Gly	Glu	Lys	Ile
1				5					10					15	
Glu	Leu	Leu	Val	Asp	Lys	Thr	Glu	Asn	Leu	Arg	Phe	Gln	Ala	Gln	Asp
			20					25					30		
Phe	Gln	Lys	Gln	Gly	Thr	Gln	Leu	Arg	Arg	Lys	Met	Trp	Phe	Gln	Asn
		35					40					45			
Met	Lys	Val	Lys	Leu	Val	Val	Leu	Gly	Ile	Val	Phe	Val	Leu	Ile	Leu
	50					55					60				
Ile	Ile	Trp	Leu	Ser	Ile	Cys	His	Gly	Phe	Lys	Cys	His			
65					70					75					

<210> 994
 <211> 110
 <212> PRT
 <213> Pinus radiata

<400> 994

Pro	Asn	Ser	Arg	Ser	Asp	Gly	Asn	Gly	Lys	Ala	Asp	Arg	Ser	Asp	Ser
1				5					10					15	
Met	Gly	Thr	Glu	Ala	Arg	Thr	Arg	Thr	Arg	Phe	Trp	Arg	Arg	Arg	Gly
			20					25					30		
Arg	Val	Arg	Arg	Leu	Lys	Tyr	Thr	Trp	Lys	Ser	Ala	Gly	His	Pro	Ser
		35					40					45			
Ile	Lys	Lys	Arg	Ile	Ala	Asp	Ser	Lys	Asp	Gln	Pro	Cys	Arg	Gln	Phe
	50					55					60				

Thr	Pro	Cys	Asp	Cys	Gln	Ser	Met	Cys	Gly	Lys	Gln	Cys	Pro	Cys	Leu
65					70					75					80
Arg	Ser	Gly	Thr	Cys	Cys	Glu	Lys	Tyr	Cys	Gly	Cys	Ser	Lys	Gly	Cys
				85					90					95	
Lys	Asn	Arg	Phe	Arg	Gly	Cys	His	Cys	Ala	Lys	Ser	Gln	Cys		
			100					105					110		

<210> 995
 <211> 293
 <212> PRT
 <213> Pinus radiata

<400> 995															
Ala	Ser	Gln	Phe	Ser	Gly	Asn	Asp	Met	Arg	Asn	Tyr	Gly	Ala	Lys	Glu
1				5					10					15	
Val	Thr	Ser	Gly	Leu	Ala	Thr	Gly	Gly	Gln	Arg	Pro	Pro	Ala	Leu	Gln
			20					25					30		
Leu	Asn	Leu	Ala	Ala	Leu	Asp	Ser	Ser	Gly	Asp	Gly	Ala	Ala	Ala	Lys
		35					40					45			
Glu	Lys	Arg	Thr	Pro	Lys	Val	Asn	Pro	Tyr	Tyr	Leu	Asn	Ser	Glu	Phe
	50					55					60				
Val	Met	Gly	Lys	Asp	Lys	Met	Pro	Pro	Pro	Pro	Pro	Asp	Asn	Lys	Lys
65					70					75					80
Gly	Gly	Met	Lys	Arg	Thr	Ala	Gln	Gly	Lys	Ser	Glu	Ile	Arg	Glu	Thr
				85					90					95	
Lys	Arg	Pro	Val	Ala	Asp	Pro	Met	Asn	Gly	Lys	Ile	Leu	Gln	Asp	Val
			100					105					110		
Met	Lys	Gln	Cys	Gly	Phe	Leu	Leu	Ser	Arg	Leu	Ile	Lys	His	Lys	His
		115					120					125			
Gly	Trp	Val	Phe	Lys	Ala	Pro	Val	Asp	Thr	Val	Ala	Leu	Gly	Leu	His
	130					135					140				
Asp	Tyr	Asn	Thr	Ile	Ile	Lys	Gln	Pro	Met	Asp	Leu	Gly	Thr	Ala	Lys
145					150					155					160
Ala	Lys	Leu	Asn	Ala	Asn	Glu	Tyr	Lys	Ser	Pro	Gln	Glu	Phe	Ala	Gly
				165					170					175	
Asp	Ile	Arg	Leu	Thr	Phe	Asn	Asn	Ala	Met	Thr	Tyr	Asn	Pro	Asn	Gly
		180						185					190		
His	Glu	Val	His	Ile	Met	Ala	Glu	Gln	Met	Leu	Gln	Phe	Phe	Glu	Asp
		195					200					205			
Arg	Trp	Lys	Pro	Ile	Cys	Asp	Arg	Tyr	Glu	Glu	Glu	Lys	Arg	Lys	Leu
	210					215					220				
Ser	Trp	Ser	Val	Asn	Asp	Gly	Leu	Leu	Pro	Gly	Ala	Ser	Gln	Asn	Met
225					230					235					240
Lys	Asn	Phe	Pro	Phe	Gly	Glu	Thr	Pro	Lys	Lys	Asn	Leu	Lys	Lys	Thr
				245					250					255	
Glu	Pro	Leu	Leu	Gly	Leu	Ser	Pro	Arg	Pro	Pro	Pro	Asn	Ala	Lys	Ser
		260						265					270		
Lys	Ala	Asn	Gln	Thr	Leu	Arg	Ala	Pro	Ala	Pro	Lys	Lys	Pro	Lys	Ala
		275					280					285			
Lys	Asp	Leu	His	Lys											
															290

<210> 996
 <211> 144
 <212> PRT
 <213> Pinus radiata

120

<400> 1001

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<210> 1002
<211> 130
<212> PRT
<213> Pinus radiata
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<400> 1002

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<210> 1003
<211> 276
<212> PRT
<213> Pinus radiata
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<400> 1003

Val Lys Leu Gly Thr Thr Asn Thr Trp Leu Ser Arg Ala Val Ser Gly

1				5					10				15			
Gln	His	Arg	Ala	Gln	Gln	Gln	Gln	Gln	Gln	His	Tyr	Ala	Glu	Arg	Ser	
			20					25					30			
Val	Glu	Glu	Gly	Arg	Lys	Trp	Cys	Gly	Cys	Ala	Ala	Gly	Ser	Arg	Asp	
		35					40					45				
Cys	Ile	His	Ser	Asn	Phe	Leu	Lys	Leu	Gln	Asn	Pro	Ala	Ser	Ala	Gly	
	50					55				60						
Ser	Ser	Ser	Ala	Ala	Ala	Asn	Ala	Leu	Ser	Gly	Arg	Trp	Leu	Met	Pro	
65				70						75					80	
Gly	Pro	Leu	Leu	Asn	Asp	Lys	Ile	Glu	Gly	Arg	Glu	Gly	Val	Glu	Leu	
				85					90					95		
Leu	Gly	Gly	Glu	Ile	Pro	Gly	Glu	Ser	Ile	Met	Ala	Leu	Ser	Ala	Gln	
			100					105					110			
Phe	Lys	Thr	Ala	Gly	Ser	Ala	Ala	Pro	Glu	Arg	Gly	Leu	Leu	Asn	Leu	
		115					120					125				
His	Ser	Ala	Asp	Ala	Val	Asn	Ser	Asn	Gly	Glu	Pro	Val	Asp	Ser	Gly	
	130					135				140						
Gly	Ala	Gly	Gly	Asp	Arg	Asp	Gly	Gly	Glu	Glu	Ala	Glu	Asp	His	Ala	
145				150					155					160		
Ala	Leu	Trp	Gln	Ser	Ala	Arg	Ile	Lys	Ala	Asp	Ile	Val	Ser	His	Pro	
			165					170						175		
Leu	Tyr	Asp	Gln	Leu	Leu	Ser	Ala	His	Leu	Glu	Cys	Leu	Arg	Ile	Ala	
		180						185				190				
Thr	Pro	Lys	Asp	Gln	His	Ser	Met	Ile	Asp	Ala	Gln	Leu	Glu	Gln	Ser	
		195					200					205				
Gln	His	Val	Val	Thr	Lys	Tyr	Ser	Val	Leu	Gly	Asn	Asp	Asn	Phe	Leu	
	210				215						220					
Val	Gly	Asp	Lys	Lys	Glu	Leu	Asp	Gln	Phe	Met	Thr	Gln	Tyr	Val	Leu	
225				230					235					240		
Leu	Leu	Cys	Ser	Phe	Lys	Glu	Gln	Leu	Gln	Tyr	His	Val	His	Val	His	
			245					250					255			
Val	Met	Glu	Ala	Val	Arg	Ala	Cys	Ile	Asp	Leu	Gln	His	Ser	Leu	Leu	
		260						265					270			
Thr	Leu	Thr	Gly													
		275														

<210> 1004
 <211> 123
 <212> PRT
 <213> Pinus radiata

<400> 1004

Ser	Cys	Ala	Val	Gln	Ser	Gln	Pro	Ala	Ala	Ser	Gly	Thr	Arg	Trp	Asn	
1				5				10					15			
Pro	Thr	Pro	Asp	Gln	Ile	Arg	Ile	Leu	Glu	Met	Phe	Tyr	Lys	Gly	Gly	
		20						25					30			
Met	Arg	Thr	Pro	Asn	Ala	Glu	Gln	Ile	Glu	His	Ile	Thr	Ala	Gln	Leu	
		35				40					45					
Arg	Gln	Tyr	Gly	Lys	Ile	Glu	Gly	Lys	Asn	Val	Phe	Tyr	Trp	Phe	Gln	
	50				55					60						
Asn	His	Lys	Ala	Arg	Glu	Arg	Gln	Lys	Gln	Lys	Arg	Asn	Ser	Ser	Met	
65				70						75					80	
His	Gln	Val	Ala	Ala	Thr	Ala	Ala	Lys	Lys	Thr	Pro	Thr	Thr	Ile	Met	
			85					90						95		
Ala	Asp	Asn	Pro	Asn	Glu	Leu	His	Lys	Pro	Asn	Ser	Asn	Gly	Thr	Tyr	
			100					105					110			
Ser	Leu	Tyr	Asn	Leu	Pro	Phe	Thr	Ala	Met	Ser						

50		55		60											
Thr	Ile	Leu	Glu	Lys	Tyr	Arg	Ile	Tyr	Thr	Gln	Thr	Glu	Thr	Asp	Gly
65					70					75					80
Asn	Met	Gly	Ala	Ser	Ser	Val	Gln	Ser	Val	Lys	Val	Gly	Glu	Ser	Gln
				85						90				95	
Leu	Lys	Ala	Leu	His	Glu	Arg	Met	Asp	Asn	Leu	Lys	Lys	Lys	Glu	Arg
			100					105					110		
Asn	Met														

<210> 1008
 <211> 90
 <212> PRT
 <213> Pinus radiata

<400> 1008															
Met	Ala	Ser	Asn	Gly	Ile	Met	Phe	Asn	Ala	Ser	Asn	Arg	Asn	Leu	Ile
1				5					10					15	
Val	Met	Val	Asn	Glu	Ala	Pro	Ser	Phe	Glu	Ala	Asn	Ser	Ser	Leu	Asp
			20					25					30		
Gly	Val	Met	Lys	Asn	Val	Ser	Lys	Arg	Pro	Phe	Tyr	Asn	Thr	Leu	Asp
		35					40					45			
Ala	Asp	Glu	Ala	Gly	Asp	Glu	Asp	Leu	Leu	Asp	Glu	Cys	Val	His	Gln
	50				55					60					
Pro	Gly	Lys	Lys	Arg	Arg	Leu	Ser	Val	Glu	Gln	Val	Arg	Phe	Leu	Glu
65					70				75						80
Lys	Ser	Phe	Glu	Leu	Asp	Asn	Lys	Leu	Glu						
				85					90						

<210> 1009
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 1009															
Leu	Glu	Arg	Ser	Ile	Arg	Gln	Gln	Arg	Ala	Phe	His	His	Leu	Gly	Leu
1				5					10					15	
Met	Glu	Gln	His	Pro	Trp	Arg	Pro	Gln	Arg	Gly	Leu	Pro	Glu	Arg	Ser
			20					25					30		
Val	Ser	Val	Leu	Arg	Ala	Trp	Leu	Phe	Glu	His	Phe	Leu	His	Pro	Tyr
		35					40					45			
Pro	Thr	Asp	Ala	Asp	Lys	His	Ile	Leu	Ala	Lys	Gln	Thr	Gly	Leu	Thr
	50				55					60					
Arg	Ser	Gln	Val	Ser	Asn	Trp	Phe	Ile	Asn	Ala	Arg	Val	Arg	Leu	Trp
65				70					75						80
Lys	Pro	Met	Val	Glu	Glu	Met	Tyr	Met	Glu	Glu	Leu	Lys	Glu	Glu	Lys
			85					90						95	
Val	Asp	Gln	Gly	Thr	His	Asn	Ser	Glu	Ala	Glu					
			100					105							

<210> 1010
 <211> 126
 <212> PRT
 <213> Pinus radiata

<400> 1010															
Met	Asn	Leu	Asn	Asp	His	Thr	Tyr	Asn	Leu	Ser	Pro	Met	Ala	Asn	Ser

<211> 108
 <212> PRT
 <213> Pinus radiata

<400> 1013
 Met Ala Gly Glu Lys Arg Lys Ile Asn Arg Ile Ala Asn Ala Ser Ala
 1 5 10 15
 Arg Gln Val Thr Phe Ala Lys Arg Arg Arg Gly Leu Phe Lys Lys Ala
 20 25 30
 Gln Glu Leu Ser Ile Leu Cys Glu Ala Asp Val Ala Leu Leu Val Phe
 35 40 45
 Ser Ser Thr Gly Lys Leu Tyr Gln Tyr Ser Ser Ser Met Lys Met
 50 55 60
 Ile Leu Asp Gln Tyr Ile Leu Tyr Ser Arg Ser Ile Gln Lys Asp Gly
 65 70 75 80
 Lys Pro Asn Leu Glu Glu Ser His Asp Ile Gln Lys Ile Lys Gln Gln
 85 90 95
 Ile Lys Asp Ile Ser Gln Asn Leu Arg Lys Leu Arg
 100 105

<210> 1014
 <211> 177
 <212> PRT
 <213> Pinus radiata

<400> 1014
 Met Gly Met Asp Met Glu Asp Cys Asn Thr Gly Leu Gly Leu Gly Met
 1 5 10 15
 Ser Ile Gly Leu Gly Met Asn Leu Met Arg Glu Asp Leu Gln Ser His
 20 25 30
 Arg His His Val Asn Gly Pro Pro Val Gln Leu Asp Leu Leu Pro Leu
 35 40 45
 Ala Pro Val Leu Pro Ser Arg Asp Leu Pro Trp Gly Lys Thr Ser Pro
 50 55 60
 Gly Thr Asp Gly Glu Arg Ser Ala Gly Glu Ser Lys Ala Thr Val Pro
 65 70 75 80
 Arg Arg Ile Asp Val Asn Lys Leu Pro Ala Ser Cys Tyr Tyr Asn Glu
 85 90 95
 Asp Thr Gly Thr Ile Asn Val Ser Ser Pro Asn Ser Ala Leu Ser Ser
 100 105 110
 Phe His Val Asp Ser Gly Gly Ala Ile Asn Ala Glu Ser Ser Cys Tyr
 115 120 125
 Gly Met Ser Val Lys Arg Glu Arg Glu Ala Thr Glu Glu Leu Glu Ala
 130 135 140
 Glu Arg Ala Cys Ser Arg Val Ser Asp Glu Glu Ala Asp Gln Glu Gly
 145 150 155 160
 Gly Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu Leu
 165 170 175
 Glu

<210> 1015
 <211> 61
 <212> PRT
 <213> Pinus radiata

<400> 1015

Met Gly Lys Lys Leu Glu Leu Lys Arg Ile Gln Asn Pro Asn Ser Ser
 1 5 10 15
 Arg Asp Ser Phe Ser Lys Cys Lys Arg Gly Leu Leu Lys Lys Ser Val
 20 25 30
 Lys Leu Phe Val Leu Cys Asp Ala Glu Val Ser Leu Ile Ile Leu Ser
 35 40 45
 Glu Thr Ala Lys Ile Tyr Glu Phe Ala Ser Asn Lys Ser
 50 55 60

<210> 1016
 <211> 51
 <212> PRT
 <213> Pinus radiata

<400> 1016
 Arg Phe Gln Ala Gln Asp Phe Gln Lys Gln Gly Thr Gln Leu Arg Arg
 1 5 10 15
 Lys Met Trp Phe Gln Asn Met Lys Val Lys Leu Val Val Leu Gly Ile
 20 25 30
 Val Phe Val Leu Ile Leu Ile Ile Trp Leu Ser Ile Cys His Gly Phe
 35 40 45
 Lys Cys His
 50

<210> 1017
 <211> 68
 <212> PRT
 <213> Pinus radiata

<400> 1017
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
 1 5 10 15
 Val Leu Ala Glu Tyr Thr Gln Phe Thr Gly Asn Phe Thr Thr Ile Ala
 20 25 30
 Asn Gln Cys Leu Gln Lys Ile Pro Ala Ser Asn Asn Lys Phe Thr Tyr
 35 40 45
 Asn Cys Asp Arg His Thr Phe Asn Tyr Leu Val Glu Asp Gly Ser His
 50 55 60
 Thr Val Leu Leu
 65

<210> 1018
 <211> 155
 <212> PRT
 <213> Pinus radiata

<400> 1018
 Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Lys Thr Ala
 20 25 30
 Thr Ala Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Asn Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp His
 50 55 60
 Val Ile His Phe Ala Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80

1 5 10 15
 Ser Ile Phe Val Gly Asp Leu Ala Pro Asp Val Thr Asp Tyr Leu Leu
 20 25 30
 Gln Glu Thr Phe Arg Ser Arg Tyr Thr Ser Val Arg Gly Ala Lys Val
 35 40 45
 Val Thr Asp Pro Ser Thr Gly Arg Ser Lys Gly Tyr Gly Phe Val Lys
 50 55 60
 Phe Ala Asp Glu Asn Glu Arg Asn Arg Ala Met Thr Glu Met Asn Gly
 65 70 75 80
 Val Tyr

<210> 1021
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 1021
 Arg Gln Glu Pro Ser Leu Lys Lys Gln Ile Ile Glu Thr Ser Glu Lys
 1 5 10 15
 Ala Ile Val Phe Ser Gln Trp Thr Ser Met Leu Asp Leu Leu Glu Val
 20 25 30
 Pro Leu Lys Lys Ser Cys Ile Gln Tyr Arg Arg Leu Asp Gly Thr Met
 35 40 45
 Ser Val Ile Ala Arg Asp Lys Ala Val Asn Asp Phe Lys Thr Leu Pro
 50 55 60
 Glu Val Thr Val Met Ile Met Ser Leu Lys Ala Ala Ser Leu Gly Leu
 65 70 75 80
 Asn Met Val Ala Ala Ser His Val Leu Leu Asp Leu Trp Val Glu
 85 90 95
 Ser Gln Gln Leu Lys Thr Lys Leu Leu Thr Gly
 100 105

<210> 1022
 <211> 99
 <212> PRT
 <213> Pinus radiata

<400> 1022
 Leu Gly Phe Glu Asp Tyr Val Glu Pro Leu Lys Ile Tyr Leu Asn Lys
 1 5 10 15
 Tyr Arg Glu Leu Glu Gly Glu Lys Ser Ser Met Ala Ala Pro Pro Arg
 20 25 30
 Gln Ser Asp Leu Gln Gln His His Val Asn Gly Ser Asp Pro His
 35 40 45
 Pro Tyr Gly His Ser Pro His Gly Pro Met Ala Tyr His Val Pro Gly
 50 55 60
 Gly Ala Ser Phe Arg Ala Trp Lys Val Thr Val Ala Cys Ser Phe Cys
 65 70 75 80
 Tyr Cys Lys Glu Val Ile Glu Met Glu Met Gly His Gly Asn Gly Asp
 85 90 95
 Cys Lys Val

<210> 1023
 <211> 158
 <212> PRT

[illegible]

Lys 1	Pro	Ala	Gly	Thr 5	Ser	Arg	Leu	Pro	Glu 10	Phe	Lys	Ser	Arg	Thr 15	Ile
Thr	Leu	Pro	Ser	Phe	Asn	Ile	Pro	Ser	Ser	Asn	Pro	Arg	Lys	Leu	Leu
Asp	Met	Val	Lys	Pro	Ser	Gln	Lys	Gln	Asn	Ile	His	Val	Asn	Gly	Lys
Pro	Glu	Ser	Arg	Ser	Leu	Met	Ser	Arg	Gln	Phe	Lys	Gly	Ile	Arg	Leu
Arg	Lys	Trp	Gly	Lys	Trp	Val	Ser	Glu	Ile	Arg	Met	Pro	Asn	Cys	Arg
Ala	Lys	Ile	Trp	Leu	Gly	Ser	Tyr	Glu	Ser	Pro	Glu	Lys	Ala	Ala	Arg
Ala	Tyr	Asp	Phe	Ala	Ala	Tyr	Cys	Leu	Arg	Gly	Ser	Lys	Ala	Arg	Phe
Asn	Phe	Pro	Asp	Ser	Pro	Pro	Glu	Ile	Pro	Cys	Ala	Ser	Ser	Leu	Ser
Pro	Ser	Gln	Ile	Gln	Ala	Gly	Ala	Ala	Arg	Phe	Ala	Ala	Glu	Glu	Phe
Gln	Met	Pro	Ser	Asp	Asp	Asp	Thr	Ala	Ser	Ser	Ser	Cys	Gly	Ser	Glu
Ala	Glu	Ser	Asp	Leu	Pro	Pro	Glu	Ile	Pro	Cys	Ala	Ser	Ser	Val	Ser
Pro	Pro	Pro	Ile	Gln	Ala	Ala	Ala	Pro	Arg	Phe	Ala	Ala	Glu	Glu	Phe
Arg	Leu	Pro	Ser	Asp	Glu	Asp	Thr	Ala	Ser	Ser	Ser	Cys	Gly	Ser	Val
Thr	Glu	Ser	Asn	Ile	Asp	Ser	Gln	Gln	Ile	Ser	Ala	Glu	Gln	Gly	Ser
Ala	Phe	Trp	Asp	Ser	Leu	Phe	Leu								

<div> <div><400> 1026</div> <div> <div>His Gln Trp</div> <div>His Arg Phe Cys Ser Arg Arg Leu Cys Cys Thr Ala Leu</div> <div>1 5 10 15</div> </div> </div>															
<div> <div>His Asn Thr</div> <div>Gln Lys Gln Cys Thr Lys Ser Ala Ala Thr Gly Lys Gly</div> <div>20 25 30</div> </div>															
<div> <div>Gly Ile Lys</div> <div>Arg Ile Arg Arg Gln Gln Glu Ala Ala Pro Ser Pro Pro</div> <div>35 40 45</div> </div>															
<div> <div>Glu Glu Ala</div> <div>Thr Leu Asn Gln Gln Thr Pro Pro Tyr Arg Gly Val Arg</div> <div>50 55 60</div> </div>															
<div> <div>Arg Arg Asn</div> <div>Trp Gly Lys Trp Val Ser Glu Ile Arg Glu Pro Lys Lys</div> <div>65 70 75 80</div> </div>															
<div> <div>Lys Thr Arg</div> <div>Ile Trp Leu Gly Ser</div> <div>85</div> </div>															

<211> 501
 <212> PRT
 <213> Pinus radiata

<400> 1027

Met	Cys	Gly	Gly	Ala	Ile	Ile	Ser	Asp	Phe	Ile	Ile	Pro	Pro	Ala	Ser
1				5					10					15	
Arg	Gly	Arg	Arg	Val	Thr	Ala	Arg	Asp	Ile	Trp	Pro	Asp	Phe	Asp	Lys
			20					25					30		
Phe	Ser	Glu	Phe	Ile	Asn	Gly	Gly	Ala	Ala	Val	Glu	Ser	Phe	Asp	Val
		35				40						45			
Ser	Val	Asp	Val	Asp	Asp	Asp	Glu	Glu	Asp	Ser	Asp	Asp	Asp	Glu	Phe
	50				55						60				
Leu	Asp	Phe	Glu	Glu	Ser	Tyr	Gln	Asn	Lys	Lys	Lys	Lys	Gln	Gln	Gln
65				70					75					80	
Pro	Ile	Ser	Pro	Thr	Lys	Gly	Phe	Glu	Leu	Pro	Leu	Ala	Arg	Gly	Leu
				85				90						95	
Asp	Gly	Pro	Ala	Ala	Lys	Ser	Ala	Val	Arg	Lys	Arg	Lys	Asn	Leu	Tyr
			100					105					110		
Arg	Gly	Ile	Arg	Gln	Arg	Pro	Trp	Gly	Lys	Trp	Ala	Ala	Glu	Ile	Arg
		115					120					125			
Asp	Pro	Arg	Lys	Gly	Ala	Arg	Val	Trp	Leu	Gly	Thr	Phe	Asn	Thr	Ala
	130					135					140				
Glu	Glu	Ala	Ala	Arg	Ala	Tyr	Asp	Ala	Ala	Ala	Arg	Lys	Ile	Arg	Gly
145				150				155						160	
Lys	Lys	Ala	Lys	Val	Asn	Phe	Val	Asp	Glu	Pro	Pro	Pro	Ser	Val	Lys
			165					170						175	
Lys	Glu	Ser	Asn	Asn	Ala	Lys	Gly	Ser	Lys	Lys	Gly	Ser	Ser	Lys	Lys
		180						185					190		
Ile	Lys	Ser	Tyr	Thr	Thr	Pro	Lys	Ala	Asp	Phe	Phe	Glu	Gly	Phe	Lys
	195						200					205			
Thr	Ala	Asn	Pro	Ser	Ile	Ala	Gln	Tyr	Asn	Phe	His	Gln	Lys	Phe	Pro
	210					215					220				
Asn	Pro	Ser	Cys	Asp	Asp	Leu	Gly	Tyr	Gln	Asn	Pro	Leu	Ser	Pro	Leu
225				230					235					240	
His	Ala	Ile	Cys	Asn	Arg	Asn	Phe	Ala	Ala	Lys	Gln	Ser	Ser	Ser	Ala
			245					250						255	
Leu	Pro	Ala	Tyr	Ser	Thr	Glu	Phe	Ser	Asp	Phe	Asp	Asp	Ser	Glu	Val
			260					265					270		
Asp	Asn	Leu	Val	Pro	Gln	Pro	Ala	Ser	Phe	Glu	Pro	Met	Lys	Asn	Ile
	275						280					285			
Asn	Lys	Arg	Lys	Gly	Tyr	Asn	Ser	Phe	Glu	Ser	Asp	Thr	Ser	Ser	Val
	290					295					300				
Ser	Ala	Asp	Arg	Ser	His	Ile	Ser	Trp	Val	Thr	Glu	Val	Lys	Thr	Pro
305				310						315					320
Glu	Ile	Ser	Ser	Val	Pro	Lys	Ala	Glu	Ala	Asp	Ser	Asp	His	Tyr	Asp
			325					330						335	
Phe	Ala	Asp	Met	Ser	Thr	Pro	Val	Ala	Thr	Ser	Val	Ser	Ala	Gly	Ser
			340					345					350		
Pro	Glu	Val	Gln	Leu	Pro	Pro	Phe	Asn	Asn	Gly	Leu	Asn	Lys	Ser	Pro
		355					360					365			
Ser	Val	Glu	Asp	Gly	Val	Ala	Ala	Glu	Lys	Ser	Pro	Lys	Leu	Glu	Glu
	370					375					380				
Ser	Ser	Gln	Leu	Glu	Ile	Ser	Glu	Asp	Leu	Pro	Ser	Leu	Glu	Ser	Tyr
385				390						395					400
Pro	Trp	Leu	Phe	Gln	Met	Pro	Tyr	Phe	Glu	Gly	Leu	Asp	Gln	Ser	Leu
				405					410					415	

Gln	Gly	Val	Gly	Ile	Gly	Asp	Ala	Ser	Phe	Pro	Asp	Gly	Glu	Asn	Asp
			420					425					430		
Leu	Gln	Leu	Trp	Ser	Phe	Asp	Ala	Val	Pro	Ile	Ser	Asp	Ser	Ala	Tyr
		435					440					445			
Ile	Ser	Leu	Glu	Ser	Leu	Ala	Cys	Lys	Gln	Leu	Val	Ile	Met	Glu	Ser
		450				455					460				
Arg	Arg	Leu	Val	Met	Ala	Ser	Phe	Cys	Arg	Pro	Ser	Ser	Asn	Arg	Glu
465					470					475					480
Leu	Val	Ile	Phe	Pro	Leu	Phe	Phe	Phe	Ile	Gln	Phe	Asp	Gly	Ala	Thr
				485					490					495	
Val	Ile	Ser	Ala	His											
			500												

<210> 1028

<211> 134

<212> PRT

<213> Pinus radiata

<400> 1028

Met	Ala	Phe	Ala	Gly	Thr	Gln	Gln	Lys	Cys	Lys	Ala	Cys	Glu	Lys	Thr
1				5				10					15		
Val	Tyr	Val	Val	Asp	Gln	Leu	Thr	Ala	Asp	Gly	Ser	Val	Phe	His	Lys
			20					25					30		
Ala	Cys	Phe	Arg	Cys	His	His	Cys	Asn	Gly	Thr	Leu	Lys	Leu	Ser	Asn
		35					40					45			
Tyr	Ser	Ser	Phe	Glu	Gly	Val	Leu	Tyr	Cys	Lys	Pro	His	Phe	Asp	Gln
	50					55					60				
Leu	Phe	Lys	Arg	Thr	Gly	Ser	Leu	Asp	Lys	Ser	Phe	Glu	Gly	Thr	Pro
65					70				75						80
Lys	Ala	Val	Lys	Asn	Glu	Lys	Leu	Asn	Asp	Gly	Glu	Ile	Lys	Thr	Pro
			85					90						95	
Asn	Arg	Val	Ser	Ala	Leu	Phe	Ser	Gly	Thr	Gln	Glu	Lys	Cys	Leu	Ala
			100					105					110		
Cys	Gly	Asn	Thr	Val	Tyr	Pro	Ile	Glu	Lys	Val	Ser	Val	Glu	Gly	Val
		115					120						125		
Gly	Tyr	His	Lys	Ala	Cys										
	130														

<210> 1029

<211> 76

<212> PRT

<213> Pinus radiata

<400> 1029

Met	Asp	Gly	Ser	Gln	Asn	Ser	Gly	Gly	Asn	Ala	Val	Pro	Pro	Phe	Leu
1				5					10					15	
Thr	Lys	Thr	Tyr	Asp	Met	Val	Asp	Asp	Ser	Ser	Thr	Asp	Ser	Ile	Val
			20					25					30		
Ser	Trp	Ser	Pro	Gly	Asn	Asn	Ser	Phe	Ile	Val	Trp	Asn	Pro	Pro	Glu
		35					40					45			
Phe	Ala	Arg	Asp	Leu	Leu	Pro	Lys	Tyr	Phe	Lys	His	Asn	Asn	Phe	Ser
	50					55					60				
Ser	Phe	Val	Arg	Gln	Leu	Asn	Thr	Tyr	Gly	Phe	Arg				
65					70					75					

<210> 1030

<211> 97

<212> PRT
<213> Pinus radiata

<400> 1030
His Glu Lys Lys Ala Val Leu Trp Asn Met Asp Thr Leu Lys Ala Lys
1 5 10 15
Gly Ser Leu Glu Glu His Ser Phe Leu Ile Thr Asp Val Arg Phe Ser
20 25 30
Pro Asn Ser Thr Arg Leu Ala Thr Ser Ser Phe Asp Arg Thr Val Lys
35 40 45
Val Trp Asp Ala Asp Asn Pro Asn Tyr Thr Leu Arg Thr Phe Ser Gly
50 55 60
His Thr Gly Ser Val Met Ser Leu Asp Phe His Pro Asn Asn Glu Asp
65 70 75 80
Leu Ile Cys Ser Cys Asp Gly Glu Ser Glu Val Arg Tyr Trp Ser Val
85 90 95
Asn

<210> 1031
<211> 117
<212> PRT
<213> Pinus radiata

<400> 1031
Met Gly Tyr Leu Gln Glu Leu Glu Asp Gln Ile Ile Gly Leu Gln Asn
1 5 10 15
Leu Val Lys Arg Asn Glu Arg Leu Tyr Gly Ser Gly Asn Thr Pro Ser
20 25 30
Gly Gly Val Ala Leu Pro Phe Ile Leu Val Gln Thr Arg Pro Gln Ala
35 40 45
Thr Val Glu Ile Glu Ile Ser Glu Asp Met Gln Leu Val His Phe Asp
50 55 60
Phe Asn Ser Thr Pro Phe Glu Leu His Asp Asp Ala Tyr Val Leu Lys
65 70 75 80
Ala Met Gly Phe Cys Glu Lys Pro Phe Thr Asp Gly Met Asp Val Thr
85 90 95
Gly His Asp Ser Phe Ala Asn Gly Thr Gly Phe Gly Glu Asn Asn Met
100 105 110
Thr Ile Thr Asn Met
115

<210> 1032
<211> 146
<212> PRT
<213> Pinus radiata

<400> 1032
Thr Arg Val Leu Leu Ile Asp Asp His Pro Leu Phe Arg Glu Gly Leu
1 5 10 15
Ala Gly Ala Ile Gln Ala Glu Pro Asp Phe Glu Val Val Gly Gln Ala
20 25 30
Gly Thr Val Asp Glu Leu Arg Gly Leu Ala Pro Gln Ile Glu Pro Asp
35 40 45
Val Ala Ile Val Asp Leu Leu Met Pro Ser Val Ser Gly Ile Gly Val
50 55 60
Thr Arg Glu Leu Cys Glu Leu Leu Pro Arg Cys Arg Val Leu Gly Leu

65					70					75					80
Ser	Ala	Val	Val	Asp	Ala	Ala	Ala	Ile	Ala	Glu	Met	Leu	Arg	Ala	Gly
				85					90					95	
Ala	Ser	Gly	Phe	Ala	Leu	Lys	Thr	Gln	Pro	Ala	Pro	Asp	Ile	Leu	Asp
			100					105					110		
Ala	Val	Arg	Arg	Thr	Val	Ala	Gly	Glu	Ser	Tyr	Leu	Pro	Pro	Ser	Val
		115					120					125			
Ser	Arg	Glu	Ala	Ile	Asp	Ala	Glu	Leu	Ala	Gly	Gly	Ala	Pro	Pro	Ser
	130					135					140				
Leu	Ala														
145															

<210> 1033
 <211> 181
 <212> PRT
 <213> Pinus radiata

Met	Ser	Ile	Leu	Pro	Lys	Ser	Asp	Ser	Ile	His	Ile	Arg	Glu	Val	Trp
1				5					10					15	
Ala	Asp	Asn	Leu	Glu	Glu	Glu	Phe	Asn	Leu	Ile	Arg	Glu	Ile	Val	Asp
		20						25					30		
Asp	Tyr	Pro	Leu	Ile	Ala	Met	Asp	Thr	Glu	Phe	Pro	Gly	Ile	Val	Val
	35						40					45			
Arg	Pro	Val	Gly	Lys	Phe	Arg	Thr	Val	Gln	Glu	Tyr	Asn	Tyr	Glu	Thr
	50					55					60				
Leu	Arg	Ser	Asn	Val	Asp	Val	Leu	Lys	Leu	Ile	Gln	Leu	Gly	Leu	Thr
65					70					75					80
Phe	Ser	Asp	Glu	Asp	Gly	Asn	Leu	Pro	Asn	Cys	Gly	Thr	Asp	Arg	Tyr
			85					90						95	
Cys	Val	Trp	Gln	Phe	Asn	Phe	Arg	Glu	Phe	Asn	Ile	Trp	Glu	Asp	Ala
			100					105					110		
Tyr	Ala	Ser	Asp	Ser	Ile	Glu	Leu	Leu	Arg	Gln	Ser	Gly	Ile	Asp	Phe
		115					120					125			
Lys	Lys	Asn	Ser	Glu	Arg	Gly	Val	Asp	Ser	His	Leu	Phe	Ala	Glu	Leu
	130					135					140				
Leu	Met	Ser	Ser	Gly	Ile	Val	Leu	Asn	Glu	Asn	Val	Arg	Trp	Ile	Thr
145					150					155					160
Phe	His	Ser	Gly	Tyr	Asp	Phe	Gly	Tyr	Leu	Leu	Lys	Leu	Val	Met	Asn
			165					170						175	
Arg	Ser	Leu	Pro	Pro											
			180												

<210> 1034
 <211> 122
 <212> PRT
 <213> Pinus radiata

Glu	His	Ala	Cys	Pro	Met	Ala	Cys	His	Pro	Gly	Pro	Cys	Pro	Pro	Cys
1				5					10					15	
Leu	Val	Ser	Val	Ser	Lys	Ser	Cys	Trp	Cys	Gly	Ser	Lys	Thr	Leu	Val
			20					25					30		
Ser	Arg	Cys	Ser	Val	Leu	Asn	Lys	Gly	Thr	Ser	Thr	Asn	Ala	Gly	Val
		35					40					45			
Gly	Pro	Val	Leu	Ser	Cys	Gly	Gln	Pro	Cys	Gly	Arg	Leu	Leu	Gly	Cys
	50					55					60				

50		55		60	
Lys	Leu	Ile	Arg	Leu	Arg
65		70		75	
Gly	Arg	Lys	Ser	Glu	Leu
		85		90	
Glu	Ser	Val	Val	Arg	Asp
		100		105	
Leu	Thr	Ala	Ser	Tyr	Lys
		115		120	
Asp	Phe	Pro	Phe	Phe	Asp
		130		135	
Gln	Lys	Ala	Ala	Ala	Ala
145		150		155	
Ala	Asn	Phe	Val	Ser	Ala
		165		170	
Glu	Met	Thr	Glu	Glu	Gly
		180		185	
Pro	Arg	Gly	Leu	Ser	Ala
		195		200	
Glu	Ser	Leu	Val	Ser	Arg
		210		215	
Ser	Met	Glu	Arg	Lys	Glu
225		230		235	
Glu					

<210> 1040
 <211> 182
 <212> PRT
 <213> Pinus radiata

<400> 1040	
Met	Val
1	
Gln	Gly
Met	Val
Thr	Thr
Leu	Arg
65	
Pro	Val
Ala	Glu
Thr	Ile
Gln	Pro
Ala	Tyr
145	
Gln	Asp
Tyr	Asn

<210> 1041
 <211> 66
 <212> PRT
 <213> Pinus radiata

<400> 1041
 Thr Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val
 1 5 10 15
 Ile Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg
 20 25 30
 His His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu
 35 40 45
 Ser Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp
 50 55 60
 Asp Lys
 65

<210> 1042
 <211> 152
 <212> PRT
 <213> Pinus radiata

<400> 1042
 Val Gly Gly Gly Gly Gly Gly Lys Gly Ser Pro Tyr Arg Gly Val Arg
 1 5 10 15
 Met Arg Lys Trp Gly Lys Trp Val Ser Glu Val Arg Glu Pro Asn Lys
 20 25 30
 Arg Ser Arg Ile Trp Leu Gly Ser Tyr Ser Thr Pro Glu Ala Ala Ala
 35 40 45
 Arg Ala Tyr Asp Thr Ala Val Phe Tyr Leu Arg Gly Pro Ser Ala Thr
 50 55 60
 Leu Asn Phe Pro Glu Glu Ala Arg Lys Glu Gln Gln Ser Asp Leu Arg
 65 70 75 80
 Leu Ser Gln Leu Gly Glu Leu Ser Pro Ser Ser Ile Gln Arg Arg Ala
 85 90 95
 Ala Glu Val Gly Ala Ala Val Asp His Ala Met Gln Ala Gly Pro Val
 100 105 110
 Pro Ala Gln Thr Leu Arg Glu Ile Asn Gln Glu Asn Asp Met Lys Asn
 115 120 125
 Ala Leu Ser Ser Lys Leu Ser Glu Gly Asn Asn Phe Lys Ile Glu Ala
 130 135 140
 Lys Asn Asn Met Arg Gln Gln Gly
 145 150

<210> 1043
 <211> 193
 <212> PRT
 <213> Pinus radiata

<400> 1043
 Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Lys Ala Cys Glu Lys Thr
 1 5 10 15
 Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Ser Val Phe His Lys
 20 25 30
 Ser Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn
 35 40 45
 Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln

50 55 60
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Ala Ile Pro
 65 70 75 80
 Arg Ala Ser Arg Asn Asp Lys Met His Glu Asn Glu Asn Arg Thr Pro
 85 90 95
 Ser Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Asp Lys Cys Val Ala
 100 105 110
 Cys Gly Lys Thr Val Tyr Pro Ile Glu Lys Val Ala Val Asp Gly Thr
 115 120 125
 Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val Ile
 130 135 140
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg His
 145 150 155 160
 His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu Ser
 165 170 175
 Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp Asp
 180 185 190
 Lys

<210> 1044
 <211> 121
 <212> PRT
 <213> Pinus radiata

<400> 1044
 Met Val Lys Pro Leu Pro Lys Gln Ser Ser Pro Ser Gly Ser Glu Asn
 1 5 10 15
 Cys Gln Ile Lys Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp
 20 25 30
 Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Ser Arg Ala Lys Ile
 35 40 45
 Trp Leu Gly Ser Tyr Asp Ser Pro Glu Lys Ala Ala Arg Ala Tyr Asp
 50 55 60
 Phe Ala Leu Tyr Cys Leu Arg Gly Ser Lys Ala Thr Phe Asn Phe Pro
 65 70 75 80
 Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Asp Leu Ser Pro Pro Gln
 85 90 95
 Ile Gln Ala Ala Ala Ala Arg Phe Ala Thr Glu Asp Phe Arg Leu Pro
 100 105 110
 Ser Glu Glu Asp Ala Ala Ser Ser Ser
 115 120

<210> 1045
 <211> 131
 <212> PRT
 <213> Pinus radiata

<400> 1045
 Met Glu Ile Arg Leu Gln Gln Glu Asn Asp Gln Asp Ile Ala Pro Pro
 1 5 10 15
 His Glu Asp Arg Val Ser Arg Gln Phe Lys Gly Val Arg Pro Arg Lys
 20 25 30
 Trp Gly Ile Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Gln Lys
 35 40 45
 Ile Trp Leu Gly Ser Tyr Lys Lys Pro Glu Gln Ala Ala Arg Ala Tyr
 50 55 60

Asp Ala Ala Val Tyr Cys Leu Arg Gly Ser Asn Ala Lys Phe Asn Phe
65 70 75 80
Pro Asn Ser Val Pro Asp Ile Pro Ser Ala Ser Ser Leu Ser Arg Gln
85 90 95
Gln Ile Gln Leu Ala Ala Ala Lys Tyr Ala Leu Asp Gln Ser Pro Ser
100 105 110
Ser Pro Pro Ser Leu Asn Asn Asn Lys Glu Glu Pro Ala Ser Pro Ser
115 120 125
Gln Ser Ser
130

<210> 1046
<211> 102
<212> PRT
<213> Pinus radiata

<400> 1046
Met Thr Gln Gln Thr Thr Ser Pro Thr Val Ser Pro Ala Ala Leu Ala
1 5 10 15
Leu Pro Thr Ser Ala Ser Ser Thr Ser Ala Lys Ser Ala Ala Val Pro
20 25 30
Val Pro Ala Gln Ala Asn Pro Arg Lys Arg Pro Arg Ser Asp Leu Ser
35 40 45
Ala Glu Glu Lys Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala
50 55 60
Gln Asn Ser Arg Asp Lys Arg Lys Gln Gln Phe Thr Ser Leu Glu Gln
65 70 75 80
Arg Val Ile Asp Leu Glu Asn Glu Asn Arg Gln Leu Arg Asp Ala Leu
85 90 95
Ala Thr Ser Gln Pro Asn
100

<210> 1047
<211> 66
<212> PRT
<213> Pinus radiata

<400> 1047
Leu Leu Thr Ile Phe Glu Ala Val Tyr Val His Lys Gly Ile Val Asn
1 5 10 15
Ala Ala Lys Val Leu Asn Leu Thr Pro Ser Ala Ile Ser Gln Ser Ile
20 25 30
Gln Lys Leu Arg Val Ile Phe Pro Asp Pro Leu Phe Ile Arg Lys Gly
35 40 45
Gln Gly Val Thr Pro Thr Ala Phe Ala Met His Leu His Glu Tyr Ile
50 55 60
Ser Gln
65

<210> 1048
<211> 106
<212> PRT
<213> Pinus radiata

<400> 1048
Met Lys Gly Pro Gln Gly Ile Ser Asn Ala Gln Asn Thr Cys Thr Lys
1 5 10 15

			100					105				110			
Ala	Arg	Leu	Asn	Phe	Pro	His	Leu	Lys	His	His	Leu	Glu	Ala	Asn	Ser
		115					120					125			
Phe	Ala	Pro	Trp	Thr	Gly	Asn	Ser	Val	Leu	Pro	Ser	Ser	Val	Asp	Ala
	130					135					140				
Lys	Leu	Gln	Ala	Ile	Cys	Gln	Ser	Leu	Lys	Gln	Pro	Leu	Glu	Ser	Met
145					150					155					160
Ser	Lys	Thr	Glu	Glu	Ser	Glu	Glu	Ile	Ser	Cys	Ala	Tyr	Glu	Asn	Ser
			165					170						175	
Gly	Ser	Leu	Gly	Ser	Val	Arg	Asp	Glu	Asp	Ala	Lys	Lys	Asn	Asp	Val
		180					185						190		
Val	Ser	Val	Lys	Ser	Glu	Thr	Cys	Asp	Ser	Asp	Ser	Ser	Asp	Asp	Ser
	195						200					205			
Thr	Ile	Thr	Ala	Leu	Asn	Ser	Ser	Gly	Asp	Gln	Asn				
	210					215					220				

<210> 1051
 <211> 219
 <212> PRT
 <213> Pinus radiata

Arg	Ile	Glu	Ala	Pro	Gly	Arg	Arg	Thr	Asn	Pro	Ala	Ala	Val	Thr	Trp
1				5				10					15		
Ala	Ala	Ala	His	Phe	Ser	Val	Lys	Glu	Gln	Asp	Arg	Phe	Leu	Pro	Ile
		20					25					30			
Ala	Asn	Val	Gly	Arg	Ile	Met	Lys	Lys	Ala	Leu	Pro	Ala	Asn	Gly	Lys
	35					40					45				
Val	Ser	Lys	Asp	Ala	Lys	Glu	Thr	Val	Gln	Glu	Cys	Val	Ser	Glu	Phe
50					55					60					
Ile	Ser	Phe	Ile	Thr	Gly	Glu	Ala	Ser	Asp	Lys	Cys	Gln	Arg	Glu	Lys
65				70					75					80	
Arg	Lys	Thr	Ile	Asn	Gly	Asp	Asp	Leu	Leu	Trp	Ala	Met	Thr	Thr	Leu
			85					90					95		
Gly	Phe	Glu	Asp	Tyr	Val	Glu	Pro	Leu	Lys	Ile	Tyr	Leu	His	Lys	Tyr
		100					105					110			
Arg	Glu	Met	Glu	Gly	Glu	Lys	Val	Ser	Met	Ala	Lys	Gln	Gly	Asp	Pro
	115					120						125			
Thr	Pro	Ser	Lys	Glu	Gly	Asn	Asn	Ala	Ile	Asn	Gly	Ser	Ser	Ile	Glu
	130					135					140				
Asn	Pro	Asn	Ala	Asn	Ala	Tyr	Ser	Gly	Leu	Asn	Pro	Gly	Gly	Tyr	Asn
145				150					155						160
Arg	Val	Gln	Ser	Gln	Ser	Leu	Pro	His	Met	Gln	Gln	Ala	Ala	Tyr	Gly
			165					170						175	
Gln	Pro	Pro	Gly	Gly	Met	Val	Tyr	Gly	His	His	Gly	His	Ile	Met	Gly
	180						185						190		
Ala	Tyr	Asn	Met	Thr	Ala	Pro	Asn	Ser	Ser	Gly	Gly	Asn	Ser	Ser	Gly
	195					200						205			
Gln	Gln	Gln	Gln	Gln	Ala	Pro	Arg	Gly	Gln	Trp					
	210					215									

<210> 1052
 <211> 100
 <212> PRT
 <213> Pinus radiata

<400> 1052

				325					330				335			
Lys	Ser	Val	Ser	Ile	Asn	Glu	Phe	Leu	Lys	Pro	Ala	Asp	Gly	Glu	Arg	
			340					345					350			
Tyr	Phe	Thr	Pro	Ser	Gly	Thr	Arg	Gly	Arg	Gly	Arg	Gly	Arg	Gly	Arg	
			355				360					365				
Gly	Arg	Gly	Asp	Gly	Val	Ser	Thr	Arg	Gly	Gly	Phe	Gly	Gly	Arg	Tyr	
			370			375					380					
Ser	Asp	Ala	Asp	Gln	Val	Ala	Ala	Pro	Cys	Ile	Glu					
385					390				395							

<210> 1056
 <211> 120
 <212> PRT
 <213> Pinus radiata

Thr	Trp	Ala	Gln	Glu	Glu	Glu	Lys	Ser	Pro	Arg	Ala	Ile	Gly	Gly	Glu	
1				5					10					15		
Lys	Gly	Gly	Arg	Gly	Leu	Arg	Gln	Phe	Ser	Met	Lys	Val	Cys	Gln	Lys	
			20					25					30			
Val	Glu	Ser	Lys	Gly	Arg	Thr	Thr	Tyr	Asn	Glu	Val	Ala	Asp	Glu	Leu	
			35				40					45				
Val	Ala	Glu	Tyr	Ala	Asn	Pro	Asn	Ser	Ala	Leu	Ile	Ser	Pro	Asp	Gln	
			50			55					60					
Gln	Gln	Tyr	Asp	Glu	Lys	Asn	Ile	Arg	Arg	Arg	Val	Tyr	Asp	Ala	Leu	
65					70				75					80		
Asn	Val	Leu	Met	Ala	Met	Asp	Ile	Ile	Ser	Lys	Asp	Lys	Lys	Glu	Ile	
			85						90					95		
Gln	Trp	Lys	Gly	Leu	Pro	Ser	Thr	Ser	Pro	Asn	Asp	Leu	Glu	Asp	Leu	
			100					105					110			
Lys	Ala	Lys	Arg	Met	Gly	Leu	Arg									
			115				120									

<210> 1057
 <211> 78
 <212> PRT
 <213> Pinus radiata

Pro	Met	Lys	Leu	Tyr	Arg	Gly	Val	Arg	Gln	Arg	His	Trp	Gly	Lys	Trp	
1				5					10					15		
Val	Ala	Glu	Ile	Arg	Leu	Pro	Arg	Asn	Arg	Thr	Arg	Leu	Trp	Leu	Gly	
			20					25					30			
Thr	Phe	Asp	Thr	Ala	Glu	Asp	Ala	Ala	Leu	Ala	Tyr	Asp	His	Glu	Ala	
			35				40					45				
Tyr	Lys	Leu	Arg	Gly	Glu	Asn	Ala	Arg	Leu	Asn	Phe	Pro	His	Leu	Phe	
			50			55					60					
Leu	Asn	Lys	Gly	Ser	Thr	Ser	Pro	Lys	Ala	Cys	Ser	Val	Ala			
65					70					75						

<210> 1058
 <211> 171
 <212> PRT
 <213> Pinus radiata

Ser	Phe	Ser	Cys	Arg	Ile	Arg	His	Gln	Thr	Glu	Pro	Thr	Leu	Ile	Leu	

65				70					75				80
Lys	Leu	Asn	Gln	Arg	Phe	Tyr	Ala	Leu	Arg	Ala	Val	Val	Pro
				85					90				95
Ser	Lys	Met	Asp	Lys	Ala	Ser	Leu	Leu	Gly	Asp	Ala	Ile	Ser
			100					105					110

<210> 1067
 <211> 73
 <212> PRT
 <213> Pinus radiata

<400> 1067													
Leu	Tyr	Ala	Glu	Glu	Ser	Ser	Thr	Val	Thr	His	Leu	Gln	Tyr
1				5					10				15
Ser	Ile	Leu	Glu	Asn	Asp	Leu	Arg	Ser	Lys	Leu	Lys	Asp	Asn
			20					25				30	
Gln	Pro	Gln	Asn	Ser	Gly	Lys	Lys	Arg	Arg	Tyr	Arg	Gly	Val
		35				40					45		
Arg	Pro	Trp	Gly	Lys	Trp	Ala	Ala	Glu	Ile	Arg	Asp	Pro	Lys
	50					55					60		
Ala	Arg	Val	Trp	Leu	Gly	Thr	Phe	Asp					
65					70								

<210> 1068
 <211> 203
 <212> PRT
 <213> Pinus radiata

<400> 1068													
Asn	Met	Ala	Lys	His	Thr	Val	Cys	Ala	Ser	Phe	Leu	Asn	Glu
1				5					10				15
Phe	Ile	Cys	Pro	Pro	Tyr	Glu	Asp	Gly	Ile	Gly	Leu	Glu	Trp
			20					25				30	
Asp	Phe	Val	Glu	Asp	Ser	Phe	Ala	Ala	Thr	Gly	Ser	Ser	Asn
		35					40				45		
Ser	Leu	Ala	Asp	Leu	Ser	Lys	Asp	Lys	Ile	Asp	Asp	Asn	Arg
	50					55				60			
Lys	Lys	Gln	Asn	Pro	Thr	Asp	Glu	Ala	Ile	Ile	Pro	Glu	Ile
65					70				75				80
Ile	Lys	Glu	Thr	Pro	Arg	Ser	Gln	Arg	Ala	Val	Pro	Gly	Arg
			85					90				95	
Ser	Lys	Arg	Arg	Arg	Ser	Ser	Gly	Ala	Pro	Ile	Arg	Gly	Trp
			100					105				110	
Ser	Glu	Asp	Tyr	Ala	Leu	Gln	Asn	Glu	Gly	Gly	Met	Lys	Thr
	115						120				125		
Gly	Ala	Asp	Ala	Ile	Asn	His	Tyr	Gln	Ser	Ser	Ala	Pro	Gln
	130				135						140		
Pro	Arg	Arg	Cys	Thr	His	Cys	Leu	Ser	Gln	Arg	Thr	Pro	Gln
	145				150					155			160
Leu	Gly	Pro	Leu	Gly	Pro	Lys	Thr	Leu	Cys	Asn	Ala	Cys	Gly
			165					170					175
Phe	Lys	Ser	Gly	Arg	Leu	Phe	Pro	Glu	Tyr	Arg	Pro	Ala	Lys
			180					185				190	
Thr	Phe	Ile	Arg	Tyr	Ile	His	Ser	Asn	Ser	His			
			195				200						

<210> 1069

<211> 190
 <212> PRT
 <213> Pinus radiata

<400> 1069

Gly	Asn	Ala	Ala	Arg	Arg	Pro	His	Asp	Val	Leu	Leu	Lys	Leu	Glu	Lys
1				5					10					15	
Leu	Ser	Ser	Gln	Thr	Thr	Leu	Glu	Ser	Leu	Gln	Arg	Leu	Ile	Val	Gln
			20					25					30		
Lys	Lys	Cys	Leu	Leu	Phe	Gly	Lys	Lys	Val	Gly	Ile	Arg	Ile	Asp	Gly
		35				40						45			
Lys	Lys	Thr	Ala	Asn	Thr	Glu	Lys	Val	Asn	Glu	Arg	Asn	Thr	Ile	Pro
	50					55					60				
Arg	Ile	Ile	Phe	Gly	Ala	Leu	Thr	Phe	Thr	Arg	Asn	Arg	Pro	His	Ala
65					70					75					80
Leu	Ser	Lys	Asn	Gly	Ser	Ile	Ala	Asp	Thr	Arg	Arg	Asn	Ile	Cys	Gly
			85						90					95	
Ala	Pro	Gln	Glu	Asp	Gly	Thr	Ile	Cys	Thr	Ala	Ile	Pro	Leu	Lys	Ser
			100					105					110		
Arg	Lys	Arg	Cys	Pro	Asp	His	Lys	Gly	Gln	Lys	Gly	Gln	Lys	Glu	Lys
		115					120					125			
Asn	Leu	Ser	Lys	Ile	Asn	Ile	Ser	Ala	Asn	Val	Glu	Ser	Arg	Asn	Gln
	130					135						140			
Gly	Val	Gly	Glu	His	Glu	Asn	Glu	Tyr	Arg	Tyr	Cys	Gly	Val	Leu	Leu
145					150					155					160
Lys	Asp	Gly	Ser	Thr	Cys	Lys	Ile	Ile	Pro	Asp	Lys	Gly	Arg	Lys	Arg
			165					170						175	
Cys	Asn	Ile	His	Lys	Gly	Met	Arg	Ile	Pro	Gly	Gln	Ala	Lys		
			180					185					190		

<210> 1070
 <211> 81
 <212> PRT
 <213> Pinus radiata

<400> 1070

Met	Ala	Thr	Ser	Asn	Pro	Phe	Asp	Leu	Leu	Gly	Asp	Asp	Asp	Asn	Gly
1				5					10					15	
Asp	Val	Ser	Gln	Leu	Val	Phe	Val	Pro	Gln	Glu	Lys	Pro	Thr	Val	Lys
			20					25					30		
Lys	Ala	Ser	Gln	Pro	Ala	Gln	Thr	Ala	Thr	Ala	Lys	Leu	Pro	Ser	Lys
		35				40						45			
Pro	Leu	Pro	Pro	Ala	Gln	Ala	Val	Arg	Glu	Ser	Arg	Asn	Gly	Val	Gly
	50					55					60				
Arg	Gly	Gly	Arg	Gly	Gly	Arg	Gly	Gly	Asp	Arg	Asn	Gln	Asp	Val	Gly
65					70				75						80
Tyr															

<210> 1071
 <211> 154
 <212> PRT
 <213> Pinus radiata

<400> 1071

Met	Asn	Arg	Glu	Lys	Leu	Met	Lys	Met	Ala	Gly	Ala	Val	Arg	Thr	Gly
1				5					10					15	

Glu Ser Gly Gly Gly His Met Gly Gly Ser Asp Phe Ser Val Lys Glu
 20 25 30
 Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Gly Arg
 35 40

<210> 1076
 <211> 282
 <212> PRT
 <213> Pinus radiata

<400> 1076
 Met Pro Met Leu Ala Glu Thr Tyr Arg Asp Ser Phe Glu Thr Thr Ser
 1 5 10 15
 Gly Gly Ser Ser Val Asp Leu Val Gly Met Ala Leu Pro Gly Leu Ala
 20 25 30
 Pro Asn Leu Ser Ser Ala Ser Val Ser Ala Ser Ala Ser Glu Asp Ser
 35 40 45
 Ala Lys Lys Ile Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser
 50 55 60
 Trp Ser Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe
 65 70 75 80
 Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val
 85 90 95
 Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys
 100 105 110
 Asn Gly Thr Arg Glu His Val Pro Pro Arg Pro Lys Arg Lys Ala
 115 120 125
 Ser His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val Pro Val Ser Gln
 130 135 140
 Gln Val Ser Thr Ala Phe Pro Thr Ala Ala Thr Gln Leu Asp Ser Gly
 145 150 155 160
 Tyr Tyr Pro Arg Ala Glu Ser Ser Ser Ile Leu Thr Lys Ser Gly Ser
 165 170 175
 Ser Cys Pro Thr Val Ser Ser Trp Val His His Thr Ile Pro Ser Ile
 180 185 190
 Asp Ala Ser Phe Val Glu Lys Asp Asp Gly Gly Pro Pro Gly Ile Glu
 195 200 205
 Thr Gly Asn Asn Cys Ser Ser Gly Ser Thr Glu Ser Ser Pro Pro Thr
 210 215 220
 Trp Pro Pro Cys Ser Glu Ile Pro Glu Lys Val Lys Pro Asp Phe Ser
 225 230 235 240
 Gln Val Tyr Lys Phe Ile Gly Ser Val Phe Asp Pro Ser Thr Thr Asp
 245 250 255
 His Leu Lys Lys Leu Lys Glu Trp Ile Gln Leu Ile Leu Lys Leu Cys
 260 265 270
 Cys Thr His Glu Glu Pro Phe His Asn Leu
 275 280

<210> 1077
 <211> 104
 <212> PRT
 <213> Pinus radiata

<400> 1077
 Met Gly Arg Ser Phe Ser Cys Trp Ser Cys Ser Lys Asp Asn Gly His
 1 5 10 15
 Glu Arg Leu Asn Arg Gly Ser Trp Ser Ala Glu Glu Asp Thr Ile Leu

$$\begin{array}{ccccccc} \{1\} & \{2\} & \{3\} & \{4\} & \{5\} & \{6\} & \{7\} \\ \{1,2\} & \{1,3\} & \{1,4\} & \{1,5\} & \{1,6\} & \{1,7\} & \{2,3\} \\ \{1,2,3\} & \{1,2,4\} & \{1,2,5\} & \{1,2,6\} & \{1,2,7\} & \{1,3,4\} & \{1,3,5\} \\ \{1,2,3,4\} & \{1,2,3,5\} & \{1,2,3,6\} & \{1,2,3,7\} & \{1,3,4,5\} & \{1,3,4,6\} & \{1,3,4,7\} \\ \{1,2,3,4,5\} & \{1,2,3,4,6\} & \{1,2,3,4,7\} & \{1,3,4,5,6\} & \{1,3,4,5,7\} & \{1,3,4,6,7\} & \{1,3,5,6,7\} \\ \{1,2,3,4,5,6\} & \{1,2,3,4,5,7\} & \{1,2,3,4,6,7\} & \{1,3,4,5,6,7\} & \{2,3,4,5,6,7\} & \{1,2,5,6,7\} & \{1,2,6,7\} \\ \{1,2,3,4,5,6,7\} & \{1,2,3,5,6,7\} & \{1,2,3,6,7\} & \{1,3,4,5,6,7\} & \{1,3,5,6,7\} & \{1,3,6,7\} & \{1,5,6,7\} \\ \{1,2,3,4,5,6,7\} & \{1,2,3,5,6,7\} & \{1,2,3,6,7\} & \{1,3,4,5,6,7\} & \{1,3,5,6,7\} & \{1,3,6,7\} & \{1,5,6,7\} \\ \{1,2,3,4,5,6,7\} & \{1,2,3,5,6,7\} & \{1,2,3,6,7\} & \{1,3,4,5,6,7\} & \{1,3,5,6,7\} & \{1,3,6,7\} & \{1,5,6,7\} \end{array}$$

Asp	Asp	Glu	Glu	Ala	Ser	Leu	Lys	Gly	Lys	Val	Arg	Trp	Gly	Leu
1			5				10					15		
Asp	Ser	Ile	Ala	Ala	Leu	Gly	Leu	Lys	Phe	Ile	Lys	Arg	Ala	Leu
		20				25					30			
Lys	Lys	Lys	Thr	Val	Gly	Ile	Ala	Gly	Gly	Ala	Asp	Arg	Val	Leu
		35				40					45			
Ser	Gly	Arg	Met	Lys	Leu	Lys	Pro	Lys	Gly	Leu	Met	Cys	Val	Phe
	50					55					60			
Gly	Leu	Leu	Arg	Val	Arg	Gly	Asn	Gly	Ile	Ile	Gly	Val	Lys	Val
65				70					75					80
Leu	Glu	Lys	Tyr	Ala	Gly	Ser	Ser	Gln	Gln	Glu	Ile	Leu	Arg	Val
				85					90					95
Ile	Ser	Leu	Ser	Phe	Ala	Phe	Gln	Asn	Glu	Asp	Arg	Leu	Leu	Pro
				100				105				110		
Ala	Ser	Gly	Arg	Gly	Lys	Glu	Glu	Ser	Gln	Phe	Arg	Ala	Met	Ala
		115				120					125			
Met	Cys	Trp	Ala	Thr	Cys	Val	Pro	Thr	Cys	Cys	Trp	Glu	Pro	Cys
	130					135					140			
Ile	Phe	Ser	Ser	Arg	Ser	Gln	Ala	Gly	Gly	Cys	Leu	Asn	Lys	Gln
145				150						155				160
Val	Asp	Ala	His	Ile	Pro	Asn	Tyr	Pro	Asn	Leu	Pro	Pro	Gln	Leu
				165					170					175
Cys	His	Tyr	Thr	Met	Leu	Leu	Cys	Arg	Gln	Met	Trp	Arg	Gln	Met
			180					185					190	

<211> 86

<213> Pin

<213> Pinus radiata

[illegible]

<211> 11

<213> Pin

<213> Pinus radiata

Met	Val	Arg	Ser	Pro	Cys	Cys	Asp	Lys	Val	His	Thr	Asn	Asn	Lys	Gly
1				5					10					15	
Ala	Trp	Thr	Lys	Glu	Glu	Asp	Glu	Arg	Leu	Ile	Ala	His	Ile	Glu	Ala
			20					25					30		

115 120 125

<210> 1085
 <211> 139
 <212> PRT
 <213> Pinus radiata

<400> 1085

Arg	Ala	Pro	Cys	Cys	Glu	Lys	Thr	His	Thr	Asn	Lys	Gly	Ala	Trp	Ser
1				5					10					15	
Lys	Asp	Glu	Asp	Glu	Ala	Leu	Val	Ala	Tyr	Ile	Gln	Ala	His	Gly	Glu
	20							25					30		
Gly	Ser	Trp	Arg	Ser	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Gln	Arg	Cys	Gly
	35						40					45			
Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu	Lys
	50					55					60				
Arg	Gly	Asn	Phe	Ser	Pro	Glu	Glu	Asp	Glu	Ile	Ile	Ile	Lys	Leu	His
65					70					75					80
Ser	Met	Leu	Gly	Asn	Lys	Trp	Ser	Leu	Ile	Ala	Ser	Lys	Leu	Pro	Gly
				85					90					95	
Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Tyr	Trp	Asn	Thr	His	Ile	Lys	Arg
			100					105					110		
Lys	Met	Leu	Glu	Arg	Gly	Leu	Asp	Pro	Ser	Thr	His	Leu	Pro	Leu	Met
	115						120					125			
Ser	Asp	His	Gly	Ser	Phe	Glu	Ser	Ser	Ser	Lys					
	130					135									

<210> 1086
 <211> 189
 <212> PRT
 <213> Pinus radiata

<400> 1086

Lys	Val	Val	Pro	Pro	Leu	Asp	Phe	Thr	Gln	Gln	Pro	Pro	Ala	Gln	Glu
1				5					10					15	
Leu	Thr	Ala	Arg	Asp	Leu	His	Asp	Asn	Glu	Trp	Lys	Phe	Arg	His	Ile
			20					25					30		
Phe	Arg	Gly	Gln	Pro	Lys	Arg	His	Leu	Leu	Thr	Thr	Gly	Trp	Ser	Val
	35						40					45			
Phe	Val	Ser	Ala	Lys	Arg	Leu	Ala	Ala	Gly	Asp	Ser	Val	Leu	Phe	Ile
	50					55					60				
Trp	Asn	Glu	Lys	Gly	Gln	Leu	Leu	Leu	Gly	Ile	Arg	Arg	Ala	Asn	Arg
65					70					75					80
Pro	Gln	Ala	Val	Met	Pro	Ser	Leu	Val	Leu	Ser	Ser	Asp	Ser	Met	His
				85					90					95	
Ile	Gly	Leu	Leu	Ala	Ala	Ala	Ala	His	Ala	Ala	Ala	Thr	Asn	Ser	Arg
			100					105					110		
Phe	Thr	Ile	Phe	Tyr	Asn	Pro	Arg	Ala	Ser	Pro	Ser	Glu	Phe	Val	Ile
	115						120					125			
Pro	Leu	Ala	Lys	Tyr	Val	Lys	Ala	Val	Tyr	His	Thr	Arg	Val	Ser	Ile
	130					135					140				
Gly	Met	Arg	Phe	Arg	Met	Leu	Phe	Glu	Thr	Glu	Glu	Ser	Ser	Val	Arg
145					150					155					160
Arg	Tyr	Met	Gly	Thr	Ile	Thr	Gly	Ile	Ser	Asp	Leu	Asp	Gln	Val	Arg
				165					170					175	
Trp	Pro	Asn	Ser	His	Trp	Arg	Ser	Val	Lys	Val	Gly	Trp			
			180					185							

<210> 1087
 <211> 132
 <212> PRT
 <213> Pinus radiata

<400> 1087

Trp	Glu	Phe	Ala	Asn	Asp	Cys	Phe	Arg	Lys	Gly	Glu	Lys	Gln	Leu	Leu
1				5					10					15	
Cys	Glu	Ile	His	Arg	Arg	Lys	Ser	Val	Gln	Gln	Ser	Ser	Ala	Ala	Pro
			20					25					30		
Ala	Ser	Arg	Cys	Val	Ser	Pro	Val	Asn	Ser	Val	Glu	Glu	Gln	Ala	Leu
		35					40					45			
Ser	Ser	Thr	Ser	Ser	Pro	Val	Ser	Ser	His	Ala	Glu	Ala	Ala	Leu	Val
	50					55					60				
Asn	Cys	Gly	Gln	Asn	Ser	Thr	Ser	Gly	Leu	His	Gly	Glu	Asn	Glu	Lys
65					70					75					80
Leu	Arg	Lys	Asp	Asn	Leu	Leu	Leu	Met	Ser	Glu	Leu	Ala	Gln	Met	Lys
				85				90						95	
Lys	Gln	Cys	Asn	Asp	Leu	Leu	Leu	Phe	Leu	Ser	Lys	Cys	Val	Asn	Ile
			100					105					110		
Thr	Pro	Asp	Asn	Leu	Ser	Asn	Ile	Leu	Ile	Ala	Ala	Ser	Gln	Thr	Asn
		115					120						125		
Cys	Arg	Asp	Glu												
			130												

<210> 1088
 <211> 214
 <212> PRT
 <213> Pinus radiata

<400> 1088

Gly	Lys	Trp	Gly	Val	Pro	Asp	Asn	Leu	Tyr	Gly	Ala	Gln	Glu	Asp	Ser
1				5					10					15	
Gly	Gly	Ser	Ser	Val	Lys	Gln	Lys	Asn	Leu	Lys	Asp	Gly	Asp	Gln	Phe
			20					25					30		
Thr	Ser	Ser	Asp	Glu	Ala	Asp	Ser	Glu	Val	Asn	Glu	Phe	Asn	Ile	Met
		35					40					45			
Lys	Arg	Ser	Asn	Ser	Gly	Val	Gly	Tyr	Glu	Asp	Asn	Lys	Arg	Ser	Gly
	50					55					60				
Gly	Gln	Gly	Asp	Gly	Asn	Gln	Tyr	Arg	Ser	Arg	His	Ser	Arg	Ser	Ile
65					70					75					80
Ser	Met	Asp	Ser	Ile	Met	Ser	Lys	Met	His	Asn	Phe	Ser	Glu	Asp	Leu
				85				90						95	
Glu	Gln	Glu	Pro	Ser	Gln	Gly	Arg	Asn	Val	Arg	His	Ser	His	Ser	Asn
			100					105					110		
Ser	Met	Asp	Gly	Ser	Thr	Asn	Phe	Asn	Val	Glu	Phe	Gly	Asn	Gly	Glu
		115					120					125			
Phe	Ser	Ala	Ser	Glu	Met	Lys	Lys	Ile	Met	Ala	Ser	Glu	Lys	Leu	Ala
		130				135					140				
Glu	Leu	Ala	Thr	Val	Asp	Pro	Lys	Arg	Val	Lys	Arg	Ile	Leu	Ala	Asn
145					150					155					160
Arg	Gln	Ser	Ala	Ala	Arg	Ser	Lys	Glu	Arg	Lys	Met	Arg	Tyr	Ile	Ser
			165					170						175	
Glu	Leu	Glu	Arg	Lys	Val	Gln	Thr	Leu	Gln	Thr	Glu	Ala	Thr	Thr	Leu
			180					185					190		
Ser	Ala	Gln	Leu	Thr	Leu	Leu	Gln	Arg	Asp	Gln	Leu	Asp	Trp	Ala	Val

Arg Lys Gly Glu
145

<210> 1094
<211> 107
<212> PRT
<213> Pinus radiata

<400> 1094
Arg Gln Leu Ile Arg Glu Leu Glu Gln Met Phe Asn Ile Glu Gly Glu
1 5 10 15
Leu Glu Asp Pro Ser Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu
20 25 30
Gly Asp Met Met Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser
35 40 45
Ile Val Arg Lys Ile Tyr Ile Tyr Thr Arg Glu Glu Val Glu Lys Met
50 55 60
Thr Pro Gln Thr Pro Ser Ala Asn Ser Arg Asp Val Gln Lys Ser Leu
65 70 75 80
Ser Gln Glu Glu Thr Ser Arg Ser Ser Asp Arg Gln Asp Ser Ser Ile
85 90 95
Ala Gly Val Thr Ala Glu Arg Ser Ser Asp Ala
100 105

<210> 1095
<211> 275
<212> PRT
<213> Pinus radiata

<400> 1095
Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
1 5 10 15
Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
20 25 30
Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
35 40 45
Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
50 55 60
Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu Gln Ala
65 70 75 80
His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Ala Leu Pro
85 90 95
Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Arg
100 105 110
Arg Arg Cys Arg Asp Pro Lys Lys Gly Ile Val Val His Leu Asp Asp
115 120 125
Glu Ile Ser Ser Leu Asp Ala Ala Arg Lys Arg Ser Ser Asp Gly Phe
130 135 140
Ser His Asp Gly Ser Ser Ala Leu Glu Asp Asn Gly Cys Ser Ser Trp
145 150 155 160
Glu Val Asp Ser Lys Arg Leu Lys Arg Leu Gly Glu Leu Gly Thr Glu
165 170 175
Gln Gly Pro Glu Val Glu Ala Glu Val Glu Val Ser Asp Arg Ser Asp
180 185 190
Ala Asn Pro Gly Arg Val Leu Tyr Arg Pro Val Pro Val Val Ser Phe
195 200 205
Phe Ser Ser Phe Gly Lys Thr Val Ala Asn Leu Gln Glu Thr Ala Ala

<210> 1098
 <211> 46
 <212> PRT
 <213> Pinus radiata

<400> 1098
 Ala Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp Ile
 1 5 10 15
 Lys Arg Gly Asn Ile Ser Pro Glu Glu Glu Glu Leu Ile Ile Arg Leu
 20 25 30
 His Arg Leu Leu Gly Asn Arg Tyr Val Glu Asn Arg Gly Thr
 35 40 45

<210> 1099
 <211> 113
 <212> PRT
 <213> Pinus radiata

<400> 1099
 Met Gly Arg Ser Pro Cys Cys Ser Lys Glu Gly Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Lys Arg Glu Asp Met Ile Leu Ser Glu Tyr Val Arg Ile His
 20 25 30
 Gly Asp Gly Gly Trp Arg Asn Leu Pro Glu Lys Ala Gly Leu Lys Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
 50 55 60
 Ile Lys Arg Gly Asn Ile Cys Pro Ala Glu Glu Leu Ile Ile Arg
 65 70 75 80
 Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu
 100 105 110
 Ser

<210> 1100
 <211> 148
 <212> PRT
 <213> Pinus radiata

<400> 1100
 Pro Tyr Leu His Glu Ser Arg His Leu His Ala Met Lys Arg Ala Arg
 1 5 10 15
 Gly Cys Gly Gly Arg Phe Leu Asn Thr Lys Lys Leu Glu Asp Ser Lys
 20 25 30
 Ala Asn Val Asp Asn Gly Lys Thr Pro Glu Gly His Thr Ala Gln Ala
 35 40 45
 Gly Ser Ser Ser Gly Ser Glu Val Leu Gln Ser Glu Asn Gly Asn Gly
 50 55 60
 Asn Ser Thr Gln Glu Leu His Gly Ala Cys Gly Met Ser Gly Ser Gln
 65 70 75 80
 Val Thr Ser Ile Ala Gln Ser Ser Glu Asn Gly Thr Thr Tyr Gln Tyr
 85 90 95
 Ser His Thr Asn Gly Ala Tyr Leu Asn His Tyr Gln His Pro His Phe
 100 105 110

His Ile Ser Ala Phe His Pro Leu Ser Ser Gly Gly Glu Glu Gly Ser
 115 120 125
 Ser Ala Lys Gly Gly Ser Ile Ile Ser Gly Gly Ser Gln Gln Arg Val
 130 135 140
 Val Val Ile Gln
 145

<210> 1101
 <211> 48
 <212> PRT
 <213> Pinus radiata

<400> 1101
 Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala
 1 5 10 15
 Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His
 20 25 30
 Gly Ser Gly Gly Trp Lys Ala Ile Ser Lys Arg Ala Gly Glu Cys Gln
 35 40 45

<210> 1102
 <211> 191
 <212> PRT
 <213> Pinus radiata

<400> 1102
 Val Thr Arg Pro Gly Lys Phe Arg Ser Cys Gln Asp Gly Tyr Ala Val
 1 5 10 15
 Arg Ala Ser Leu Lys Ala Glu Asp Gly Val Leu Tyr Pro Leu Glu Lys
 20 25 30
 Ser Phe Phe Phe Leu Pro Lys Pro Thr Leu Ile Leu His Glu Glu
 35 40 45
 Ile Glu Tyr Leu Glu Phe Glu Arg His Gly Ala Ala Gly Thr Ser Ser
 50 55 60
 Met Ser Ser His Tyr Phe Asp Leu Ile Ile Lys Leu Lys Ser Glu Gln
 65 70 75 80
 Glu His Gln Phe Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe
 85 90 95
 Ser Phe Ile Asn Thr Lys Gly Leu Lys Ile Ile Asn Leu Gly Ala Thr
 100 105 110
 Glu Thr Ile Gly Gly Val Ala Ala Leu Gln Asn Ser Asp Asp Glu
 115 120 125
 Ala Val Asp Pro His Leu Glu Arg Ile Lys Ile Tyr Val Met Val Glu
 130 135 140
 Leu Val Leu Lys Thr Ala Thr Lys Arg Met Lys Thr Leu Leu Gln Lys
 145 150 155 160
 Thr Met Met Leu Asp Leu Gln Gln Met Ser Gln Lys Lys Arg Asp Gln
 165 170 175
 Met Gln Val Arg Val Gln Arg Ser Ser Asn Leu Gln Arg Lys Lys
 180 185 190

<210> 1103
 <211> 106
 <212> PRT
 <213> Pinus radiata

<400> 1103

Met	Ser	Pro	Pro	Pro	Ser	Tyr	Ser	Met	Phe	Pro	Asn	Ser	Gly	Met	Gly
1				5					10					15	
Leu	Asn	Pro	Ser	Val	Thr	Ser	Ser	Glu	Pro	Ser	Ser	Gln	Val	Ser	Gly
			20					25					30		
Ser	Ile	Pro	His	Gln	Tyr	Ser	Gly	Ser	Glu	Glu	Asp	Pro	Lys	Leu	Thr
		35					40					45			
Ile	Asp	Glu	Arg	Lys	Gln	Lys	Arg	Met	Leu	Ser	Asn	Arg	Glu	Ser	Ala
	50					55					60				
Arg	Arg	Ser	Arg	Met	Arg	Lys	Gln	Gln	His	Leu	Asp	Glu	Leu	Arg	Ala
65					70					75					80
Arg	Thr	Ala	His	Leu	Arg	Ala	Glu	Asn	Ser	His	Met	Leu	Thr	Lys	Phe
			85					90						95	
Asn	Ile	Ala	Ser	Gln	Lys	Tyr	Met	Gln	Leu						
			100					105							

<210> 1104

<211> 162

<212> PRT

<213> Pinus radiata

<400> 1104

Arg	Gly	Gln	Pro	Arg	Arg	His	Leu	Leu	Thr	Thr	Gly	Trp	Ser	Val	Phe
1				5					10					15	
Val	Ser	Ala	Lys	Arg	Leu	Val	Ala	Gly	Asp	Ala	Phe	Ile	Phe	Leu	Arg
			20					25					30		
Gly	Glu	Asn	Ser	Glu	Leu	Arg	Val	Gly	Val	Arg	Arg	Val	Met	Arg	Gln
		35					40					45			
Gln	Ser	Asn	Met	Pro	Ser	Ser	Val	Ile	Ser	Ser	His	Ser	Met	His	Leu
	50					55					60				
Gly	Val	Ile	Ala	Thr	Ala	Ser	His	Ala	Val	Thr	Thr	Arg	Thr	Met	Phe
65					70					75					80
Thr	Val	Tyr	Tyr	Lys	Pro	Arg	Thr	Ser	Gln	Ser	Glu	Phe	Ile	Ile	Pro
				85				90					95		
Tyr	Asp	Lys	Tyr	Met	Glu	Ala	Val	Asn	Ser	Asn	Leu	Ser	Val	Gly	Met
			100					105					110		
Arg	Phe	Lys	Met	Arg	Phe	Glu	Gly	Glu	Glu	Ala	Pro	Glu	Arg	Arg	Phe
		115					120					125			
Thr	Gly	Thr	Ile	Ile	Gly	Ile	Gly	Asp	Val	Asp	Pro	Ser	Arg	Trp	Pro
	130				135						140				
Ser	Ser	Lys	Trp	Arg	Ser	Leu	Lys	Val	Gln	Trp	Asp	Glu	Thr	Cys	Ala
145					150					155					160
Ile	Pro														

<210> 1105

<211> 115

<212> PRT

<213> Pinus radiata

<400> 1105

Met	Ala	Gln	Ser	Glu	Glu	Gln	Pro	Asn	Glu	Ala	Thr	Val	Pro	Arg	Pro
1				5					10					15	
Ala	Asp	Ser	His	Arg	Ser	Ile	Pro	Thr	Pro	Phe	Leu	Met	Lys	Thr	Tyr
			20					25					30		
Arg	Leu	Val	Asp	Asp	Pro	Ser	Leu	Asn	Asp	Ile	Ile	Ser	Trp	Asn	Glu
		35					40					45			
Asp	Gly	Thr	Thr	Phe	Ile	Val	Trp	Arg	Pro	Ala	Glu	Phe	Ala	Arg	Asp

50 55 60
 Leu Leu Pro Asn Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg
 65 70 75 80
 Gln Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu
 85 90 95
 Phe Ala Asn Glu Phe Phe Arg Arg Gly Glu Lys Lys Leu Leu Cys Glu
 100 105 110
 Ile His Arg
 115

<210> 1106
 <211> 37
 <212> PRT
 <213> Pinus radiata

<400> 1106
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala
 1 5 10 15
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His
 20 25 30
 Gly Glu Gly Asn Trp
 35

<210> 1107
 <211> 187
 <212> PRT
 <213> Pinus radiata

<400> 1107
 Thr Arg Ser Gly Ser Lys Asn Ser Ala Arg Ala Pro Val Ser Gly Phe
 1 5 10 15
 Ser Met Asn Ser Asn Met Gly Val Ser Gly Gly Leu Asp Glu Ser Gly
 20 25 30
 Phe Ser Gln Pro Pro Pro Asn Phe Ala Lys Met Asn Ala Pro Thr Arg
 35 40 45
 Thr Phe Thr Lys Val Tyr Lys Leu Gly Ser Val Gly Arg Ser Val Asp
 50 55 60
 Val Thr Arg Phe Arg Gly Tyr Pro Asp Leu Arg Ala Glu Leu Asp Arg
 65 70 75 80
 Met Phe Gly Leu Glu Gly Gln Leu Glu Asn Pro Arg Ser Ser Trp Gln
 85 90 95
 Leu Val Phe Val Asp Lys Glu Lys Asp Val Leu Leu Leu Gly Asp Asp
 100 105 110
 Pro Trp Glu Glu Phe Val Asn Asn Val Arg Phe Ile Lys Ile Leu Ser
 115 120 125
 Pro Pro Glu Val Gln Gln Met Ser Gln Glu Asp Met Glu Phe Trp Ser
 130 135 140
 Ser Ile Pro Thr Gln Gln Thr Ser Ser Ser Asp Asp Cys Val
 145 150 155 160
 Ala Arg Asn Ser Ser Arg Asn Ile Arg Ser Val Leu Thr Ser Pro Gly
 165 170 175
 Ser Leu Asp Val Leu Ser Val Asp Pro Ile Val
 180 185

<210> 1108
 <211> 130
 <212> PRT

Leu His Glu Leu Ile Gly Asn Arg Trp Ser Thr Ile Ala Ser Tyr Leu
85 90 95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Val Trp Asn Thr His Leu
100 105 110
Lys Lys Arg Leu Ala Arg Met Lys Ala Asp Ser Val Ala Val Asp Ala
115 120 125
Gln Pro Thr Pro Ala Ser Ser Leu Ala Ser Ser Thr Thr Glu Met Thr
130 135 140
Cys His
145

<210> 1111
<211> 72
<212> PRT
<213> Pinus radiata

<400> 1111
Cys Ile Glu Ala Asn Gly Gly Gly Ala Pro Gly Arg Ser Leu Pro Lys
1 5 10 15
Ala Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile
20 25 30
Asn Tyr Leu Arg Pro Asp Asp Val Lys Arg Gly Asn Phe Thr Glu Glu
35 40 45
Glu Asp Asp Leu Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp
50 55 60
Ser Leu Ile Ala Gly Arg Leu Pro
65 70

<210> 1112
<211> 112
<212> PRT
<213> Pinus radiata

<400> 1112
Met Arg Arg Leu Arg Cys Glu Lys Gly Asn Thr Asn Lys Gly Ala Trp
1 5 10 15
Thr Gln Gln Glu Asp Ala Arg Leu Ile Ala Tyr Ile Arg Ala His Gly
20 25 30
Glu Gly Gly Trp His Ser Leu Pro Arg Ala Ala Gly Leu Leu Arg Cys
35 40 45
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asn Leu
50 55 60
Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile Lys Leu
65 70 75 80
His Asn Leu Leu Gly Asp Lys Trp Ser Leu Ile Ala Gly Arg Leu Pro
85 90 95
Gly Arg Met Glu Asp Gln Ile Lys Asn Tyr Trp Asp Thr His Phe Lys
100 105 110

<210> 1113
<211> 148
<212> PRT
<213> Pinus radiata

<400> 1113
Gly Lys Glu Val His Ile Ala Glu Pro Asp Gln Val Ser Asp Pro Pro
1 5 10 15

Lys Ala Ile Lys Tyr Glu Pro Pro Ala Val Ser Cys Asp Gln Glu Lys
 20 25 30
 Pro Leu Gln Lys Leu Ser Lys Glu Thr Gln Val Lys Gln His Gly Asn
 35 40 45
 Pro Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Ile Ala Leu Gly
 50 55 60
 Arg Ala Val Asp Leu Thr Lys Phe Glu Gly Tyr Glu Glu Leu Ile Cys
 65 70 75 80
 Glu Leu Glu Arg Met Phe Asn Ile Glu Gly Glu Leu Arg Asn Pro Ser
 85 90 95
 Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu
 100 105 110
 Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser Ile Val Arg Lys Ile
 115 120 125
 Phe Ile Tyr Thr Arg Glu Glu Val Glu Lys Met Thr Pro Gln Lys His
 130 135 140
 Ala Lys Leu Gln
 145

<210> 1114
 <211> 273
 <212> PRT
 <213> Pinus radiata

<400> 1114
 Glu Thr Gln Ser Ser Asp Asn Asn Tyr Met Val Gly Phe Val Leu Ala
 1 5 10 15
 Asn Val Val Gly Leu Gln Tyr Tyr Thr Gly Thr Ile Asn Gly Arg Glu
 20 25 30
 Met Ile Arg Leu Val Arg Glu Pro Glu Asn Arg Tyr Asp Pro Asn Ala
 35 40 45
 Ile Lys Val Leu Asn Met Ser Gly Gln Gln Val Gly His Ile Glu Arg
 50 55 60
 Ala Val Ala Leu Ala Leu Ala Ser His Val Asp Gln Ser Leu Ile Leu
 65 70 75 80
 Ile Glu Gly Ile Val Ser Arg Ala Leu His Lys Gly Ala Tyr Lys Leu
 85 90 95
 Pro Cys Gln Ile Tyr Ile Phe Ser His Arg Asp Ser Met Gly Met Val
 100 105 110
 Leu Gln Leu Leu Lys Gly Ala Gly Leu Asn Val Ile Thr Ala Glu Asp
 115 120 125
 Gln Glu Phe Leu Thr Ala Glu Ser Ile Ala Ala Lys Glu Ile Tyr Glu
 130 135 140
 Asp Pro Gly Val Lys Glu Val Arg Arg Val Asp Asp Ile Phe Gly Ser
 145 150 155 160
 Leu Asn Asn Pro Lys Lys Arg Gln Ser Met Glu Ala Cys Glu Leu Val
 165 170 175
 Thr Ser Thr Leu Leu Gln His Gln Lys Glu Ala Leu Ala Trp Met Val
 180 185 190
 Gln Arg Glu Asn Ser Ser Glu Leu Pro Pro Phe Trp Asp Val Cys Asp
 195 200 205
 Lys Thr Ser Lys Ser Gln Gln Leu Arg Tyr Lys Asn Val Leu Thr Asn
 210 215 220
 Phe Glu Thr Asn Gly Arg Pro Lys Pro Leu Arg Gly Gly Ile Leu Ala
 225 230 235 240
 Asp Asp Met Gly Leu Gly Lys Thr Leu Ser Leu Leu Ser Leu Ile Ala
 245 250 255

Thr Asn Arg Pro Gly Ala Lys Leu Pro Pro Val Val Asp Ile Ala Pro
 260 265 270
 Ser

<210> 1115
 <211> 129
 <212> PRT
 <213> Pinus radiata

<400> 1115
 Leu Ile Pro Gln His Asn Ala Phe Ser Leu Glu Leu Arg Phe Ser Asp
 1 5 10 15
 Arg Gln Leu Pro Ser Ser Thr Pro Pro Asn Cys Asp Ser Met Phe Pro
 20 25 30
 Ser His Tyr Thr Ala Leu Ala Leu Arg Arg Gln Met Trp Arg Asn Pro
 35 40 45
 Arg Glu Ser Gly Gln Ser His Ser Gln Pro Pro Glu Lys Asp Arg Gly
 50 55 60
 Lys Thr Phe Gly Gln Phe Lys Gly Ile Arg Met Arg Lys Trp Gly Lys
 65 70 75 80
 Trp Val Ser Glu Ile Arg Met Pro Arg Ser Lys Glu Arg Ile Trp Leu
 85 90 95
 Gly Ser Tyr Lys Thr Val Glu Gln Ala Ala Arg Ala Tyr Asp Ala Ala
 100 105 110
 Leu Tyr Cys Leu Arg Gly Pro Asn Ala Lys Phe Asn Phe Pro Asn Ser
 115 120 125
 Val

<210> 1116
 <211> 90
 <212> PRT
 <213> Pinus radiata

<400> 1116
 Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1 5 10 15
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Lys Thr Ala
 20 25 30
 Thr Ala Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
 35 40 45
 Asn Asn Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp His
 50 55 60
 Val Ile His Phe Ala Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
 65 70 75 80
 Thr Trp Val Gly Ser Gly His Arg Lys Gln
 85 90

<210> 1117
 <211> 33
 <212> PRT
 <213> Pinus radiata

<400> 1117
 Gly Lys Thr Gln Met Lys Leu Lys Arg Glu Arg Asp Gln Gln Ala Arg
 1 5 10 15

Asp Ala Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu
 20 25 30
 Ser

<210> 1118
 <211> 107
 <212> PRT
 <213> Pinus radiata

<400> 1118
 Met Gly Arg Ala Pro Cys Cys Ala Asn Gly Asp Arg Ser Lys Gly Ala
 1 5 10 15
 Trp Thr Lys Glu Asp Asp Arg Leu Thr Gln Tyr Ile Gln Ala His
 20 25 30
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
 35 40 45
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50 55 60
 Leu Lys Arg Gly Gly Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys
 65 70 75 80
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85 90 95
 Pro Gly Arg Thr Gly His Gln Asn Gln Asn Tyr
 100 105

<210> 1119
 <211> 112
 <212> PRT
 <213> Pinus radiata

<400> 1119
 Arg Lys Ser Asn Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp
 1 5 10 15
 Thr Ser Thr His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu
 20 25 30
 Cys Leu Pro Pro Leu Asp Met Ser Gln Gln Pro Pro Ser Gln Glu Leu
 35 40 45
 Val Ala Arg Asp Leu His Gly Met Glu Trp Arg Phe Arg His Ile Phe
 50 55 60
 Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe
 65 70 75 80
 Val Ser Ser Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg
 85 90 95
 Gly Glu Ser Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln
 100 105 110

<210> 1120
 <211> 156
 <212> PRT
 <213> Pinus radiata

<400> 1120
 Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly Gly
 1 5 10 15
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg
 20 25 30

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<211> 70
 <212> PRT
 <213> Pinus radiata

<400> 1125
 Met Asp Arg Ser Ser Ser Glu Asp Ser Val Asp Ser Gln Gly Asp Val
 1 5 10 15
 Asn Ala Asn Tyr Lys Met Val Phe Ser Glu Asp Glu Lys Asp Leu Ile
 20 25 30
 Ser Arg Leu Tyr Asn Leu Leu Gly Gln Arg Trp Ala Leu Ile Ala Gly
 35 40 45
 Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys Tyr Cys Ser Arg
 50 55 60
 Arg Tyr Ile Ser Glu Tyr
 65 70

<210> 1126
 <211> 120
 <212> PRT
 <213> Pinus radiata

<400> 1126
 Gly Gly Glu Ile Arg Ile Leu Arg Gly Phe Phe Val Asn Gln Lys Thr
 1 5 10 15
 Asp Gly Gln Gly Ser Ser Phe Ala Ala Ser Ser Ser Arg Asn Ser Ser
 20 25 30
 Phe Ser Asn Gly Tyr Asp Asn Pro Gln Asn Thr Asn Lys Asn Ser Ser
 35 40 45
 Ser Gly Gly Thr Gly Asp Ala Gly Ser Phe Glu Cys Asn Ile Cys Leu
 50 55 60
 Glu Leu Ala Gln Asp Pro Ile Val Thr Leu Cys Gly His Leu Phe Cys
 65 70 75 80
 Trp Pro Cys Leu Tyr Lys Trp Leu His Gly His Ser Lys Ser Gln Glu
 85 90 95
 Cys Pro Val Cys Lys Ala Leu Val Glu Glu Asp Lys Ile Val Pro Leu
 100 105 110
 Tyr Gly Arg Gly Lys Val Gly Ser
 115 120

<210> 1127
 <211> 233
 <212> PRT
 <213> Pinus radiata

<400> 1127
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu
 1 5 10 15
 Lys Ala Gly Val Glu Lys Tyr Gly Thr Gly Lys Trp Arg Thr Ile Gln
 20 25 30
 Lys Asp Pro Glu Phe Gly His Cys Leu Ala Ala Arg Ser Asn Val Asp
 35 40 45
 Leu Lys Asp Lys Trp Arg Asn Met Ser Val Ser Ala Ser Gly Gln Gly
 50 55 60
 Ser Arg Asp Lys Val Lys Thr Pro Arg Val Lys Ala Ile Ala Ser Leu
 65 70 75 80
 Pro Tyr Ser Ser Val Thr Ala Glu Ser Thr Ser Val Phe Ser Ile Glu
 85 90 95

50		55		60													
Glu	Ala	Glu	Ala	Lys	Ser	Ser	Glu	Gly	Lys	Glu	Arg	Asn	Thr	Met	Lys		
65					70					75					80		
Arg	Ser	Lys	Gly	Ser	Leu	Gly	Ser	Leu	Gly	Met	Ile	Thr	Gly	Lys	Gly		
				85					90					95			
Gly	Glu	Gly	Gly	Lys	Ala	Thr	Ser	Gly	Ser	Ala	Asn	Glu	Ala	Met	Ser		
			100					105					110				
Gln	Ser	Gly	Asp	Ser	Gly	Ser	Asp	Gly	Ser	Ser	Glu	Gly	Ser	Glu	Glu		
		115					120					125					
Tyr	Asn	Thr	Gln	Thr	Glu	Ser	Gln	Val	Ala	Arg	Lys	Arg	Ser	Phe	Asp		
130						135					140						
Gln	Met	Ile	Val	Asp	Gly	Ala	Asn	Ala	Gln	Ser	Thr	Asn	Ile	Gln	Ser		
145				150						155					160		
Tyr	Asn	Ser	Gln	Ala	Gly	Glu	Pro	Tyr	Val	Thr	Ser	Gly	Gly	His	Ala		
			165						170					175			
Met	Gly	Asn	Pro	Ile	Ser	Gln	Ala	Val	Ala	Ala							
			180					185									

<210> 1130
 <211> 80
 <212> PRT
 <213> Pinus radiata

<400> 1130																	
Gly	Lys	Val	Thr	Ala	Ser	Gly	Lys	Val	Thr	Ser	Gly	Val	Asn	Asp	Leu		
1				5				10					15				
Phe	Trp	Glu	Gln	Phe	Leu	Thr	Glu	Thr	Pro	Gly	Ser	Ala	Thr	Asp	Thr		
		20					25					30					
Gln	Glu	Ala	Glu	Ser	Lys	Ile	Gln	Glu	Thr	Arg	Thr	Lys	Asp	Gln	Asp		
		35				40					45						
Glu	Arg	Leu	Pro	Glu	Asn	Gly	Lys	Cys	Trp	Ser	Asn	Lys	Gln	Thr	Leu		
50					55					60							
Asp	Gln	Leu	Thr	Glu	Gln	Met	Gly	Gln	Leu	Ala	Ser	Gly	Thr	Gln	Thr		
65				70				75						80			

<210> 1131
 <211> 96
 <212> PRT
 <213> Pinus radiata

<400> 1131																	
Met	Asn	Met	Asp	Ser	Arg	Gln	Ser	Gly	Glu	Glu	Glu	Asp	Cys	Asn	Val		
1				5				10					15				
Thr	Arg	Pro	Gly	Gly	Gly	Gly	Gly	Ile	Ser	Leu	His	Val	Ser	Ser	Val		
		20					25					30					
Glu	Tyr	Cys	Gln	Lys	Ser	Ala	Cys	Val	Ala	His	Asp	Ile	Ser	Ser	Asp		
		35				40					45						
Glu	Gln	Asp	Leu	Ile	Asn	Arg	Leu	His	Asn	Leu	Leu	Gly	Asp	Arg	Trp		
50					55					60							
Ala	Leu	Ile	Ala	Gly	Arg	Leu	Pro	Trp	Arg	Arg	Arg	Glu	Glu	Ile	Glu		
65				70				75						80			
Asn	Tyr	Cys	Lys	Met	Arg	Tyr	Thr	Ala	Thr	Thr	Ser	Ser	Ser	Arg	Ser		
			85					90						95			

<210> 1132
 <211> 193
 <212> PRT

<213> Pinus radiata

<400> 1132

Glu	Arg	Glu	Arg	Gly	Arg	Lys	Pro	Ala	Asn	Gly	Arg	Glu	Glu	Pro	Leu
1				5					10					15	
Asn	His	Val	Glu	Ala	Glu	Arg	Gln	Arg	Arg	Glu	Lys	Leu	Asn	Gln	Lys
			20					25					30		
Phe	Tyr	Glu	Leu	Arg	Ala	Val	Val	Pro	Asn	Val	Ser	Lys	Met	Asp	Lys
		35					40					45			
Ala	Ser	Leu	Leu	Gly	Asp	Ala	Ala	Ala	Tyr	Ile	Lys	Asp	Leu	Phe	Ser
	50				55						60				
Lys	Gln	Gln	Asp	Leu	Glu	Ser	Glu	Arg	Val	Asp	Met	Gln	Val	Gln	Ile
65					70					75					80
Asp	Thr	Ile	Lys	Lys	Glu	Leu	Leu	Met	Asn	Ser	Leu	Lys	Leu	Ala	Ala
			85						90					95	
Lys	Glu	Ala	Lys	Asp	Leu	Ser	Ser	Ile	Asp	Leu	Lys	Gly	Phe	Ser	Gln
			100					105					110		
Gly	Lys	Phe	Pro	Gly	Leu	Asn	Ser	Glu	Val	Arg	Ile	Val	Gly	Arg	Glu
		115					120					125			
Ala	Ile	Ile	Arg	Ile	Gln	Cys	Thr	Lys	His	Asn	His	Pro	Val	Ala	Arg
	130					135					140				
Leu	Met	Ile	Ala	Leu	Gln	Glu	Leu	Asp	Leu	Glu	Val	Leu	His	Ala	Ser
145					150					155					160
Ile	Ser	Thr	Val	Lys	Asp	Ser	Leu	Ile	Ile	Gln	Thr	Val	Ile	Val	Lys
			165						170					175	
Met	Thr	Arg	Gly	Leu	Tyr	Thr	Glu	Asp	Gln	Leu	His	Ala	Leu	Leu	Cys
			180					185					190		

Lys

<210> 1133

<211> 88

<212> PRT

<213> Pinus radiata

<400> 1133

Met	Ala	Tyr	Asn	Arg	Lys	His	Ala	Ala	Ala	Ala	Thr	Ser	Pro	Asp	Ser
1				5					10					15	
Ser	Leu	Gly	Ser	Asp	Asn	Glu	Ser	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
			20					25					30		
Gly	Lys	Gly	Gln	Ser	Thr	Lys	Asn	Gly	Asn	Gly	Asn	Tyr	Ile	Arg	Glu
		35					40					45			
Gln	Asp	Arg	Leu	Leu	Pro	Ile	Ala	Asn	Val	Gly	Arg	Ile	Met	Lys	Arg
	50				55					60					
Ala	Leu	Pro	Gly	Asn	Ala	Lys	Ile	Ser	Lys	Asp	Ala	Lys	Glu	Thr	Val
65					70					75					80
Gln	Glu	Cys	Val	Ser	Glu	Phe	Ile								
			85												

<210> 1134

<211> 141

<212> PRT

<213> Pinus radiata

<400> 1134

Met	Ala	Thr	Arg	Asn	Pro	Phe	Asp	Leu	Leu	Glu	Asp	Asp	Asp	Asn	Gly
1				5					10					15	

Asp	Pro	Ser	Ser	Leu	Leu	Asp	Thr	Leu	Ala	Ala	Ala	Lys	Asp	Lys	Pro
			20					25					30		
Ala	Ala	Val	Ala	Ala	Lys	Lys	Gln	Gln	Pro	Ala	Val	Ser	Ala	Ser	Gly
		35					40					45			
Lys	Leu	Pro	Thr	Lys	Pro	Leu	Pro	Pro	Ala	Gln	Ala	Val	Lys	Glu	Ser
	50					55					60				
Arg	Val	Ser	Pro	Asn	Glu	Gly	Gly	Arg	Gly	Arg	Gly	Gly	Gly	Arg	Gly
65					70					75					80
Gly	Arg	Gly	Phe	Gly	Asn	Arg	Glu	Ser	Gln	Glu	Phe	Gly	Arg	Gly	Arg
			85						90					95	
Gly	Gly	Gly	Tyr	Asn	Val	Glu	Arg	Asn	Phe	Asn	Arg	Glu	Asn	Asn	Ala
			100					105					110		
Tyr	Ser	Gly	Ser	Arg	Val	Gly	Phe	Tyr	Asp	Asn	Asn	Ser	Asp	Leu	Ile
	115						120					125			
Pro	Ser	Arg	Asn	Glu	Asp	Gly	Asp	Gly	Ala	Ser	Asn	Asp			
	130					135					140				

<210> 1135
 <211> 43
 <212> PRT
 <213> Pinus radiata

Met	Pro	Arg	Val	Lys	Leu	Ile	Ser	Arg	Asn	Phe	Met	Asp	Met	Val	Ala
1				5					10					15	
Ala	Leu	Pro	Ala	Ala	Lys	Leu	Asp	Arg	Leu	Tyr	Asp	Lys	Ser	Leu	His
			20					25					30		
Leu	Arg	Ser	Gly	Leu	Arg	Ser	Leu	Thr	Pro	Val					
	35						40								

<210> 1136
 <211> 48
 <212> PRT
 <213> Pinus radiata

Met	Ala	Glu	Glu	Met	Asp	Thr	Pro	Thr	Lys	Thr	Thr	Lys	Thr	Pro	Thr
1				5					10					15	
Ser	Gln	Glu	Gln	Thr	Ser	Thr	Ser	Thr	Pro	Val	Ala	Tyr	Pro	Glu	Trp
			20					25					30		
Ala	Ala	Pro	Ile	Gln	Ala	Leu	Tyr	Asn	Ser	Gly	Lys	Thr	Pro	Leu	Pro
	35						40					45			

<210> 1137
 <211> 190
 <212> PRT
 <213> Pinus radiata

Ser	Phe	Ser	Ser	Thr	Arg	Glu	Ser	Met	Glu	Arg	Arg	Asp	Gln	Ser	Pro
1				5					10					15	
Val	Ala	Ala	Arg	His	Pro	Met	Arg	Lys	His	Tyr	Arg	Gly	Val	Arg	Gln
			20					25					30		
Arg	Gln	Trp	Gly	Lys	Trp	Val	Ala	Glu	Ile	Arg	Leu	Pro	Gln	Asn	Arg
	35						40					45			
Thr	Arg	Leu	Trp	Leu	Gly	Thr	Phe	Asp	Thr	Ala	Glu	Ala	Ala	Ala	Leu
	50					55					60				

Ala	Tyr	Asp	Arg	Ala	Ala	Tyr	Arg	Trp	Arg	Gly	Glu	Cys	Ala	Arg	Leu
65					70					75					80
Asn	Phe	Pro	His	Leu	Phe	Ser	Lys	Lys	Tyr	Gln	Asn	Ser	Ser	Pro	Ser
				85					90					95	
Ser	Thr	Asn	Gly	Arg	Ile	Pro	Arg	Leu	Ser	Cys	Glu	Lys	Ser	Asp	Gln
		100						105						110	
Lys	Tyr	Ala	Tyr	Asn	Gly	Asp	Pro	Val	His	Thr	Asn	Val	Tyr	Lys	Gly
		115					120					125			
Pro	Pro	Ile	Arg	Ile	Thr	Ala	Tyr	Asn	Gly	Asp	Pro	Val	Pro	Ile	Asp
		130				135					140				
Val	Tyr	Arg	Ser	Asp	Pro	Val	Arg	Val	Ser	Ala	Tyr	Thr	Gly	Asp	Pro
145					150					155					160
Val	Arg	Ile	Ser	Ala	Tyr	Ser	Gly	Asp	Pro	Val	Gly	Asn	Thr	Val	Thr
				165					170					175	
Leu	Ala	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Cys	Ser	His	Glu	Ser		
			180					185					190		

<210> 1138
 <211> 177
 <212> PRT
 <213> Pinus radiata

<400> 1138															
Leu	Asp	Tyr	Met	Glu	Glu	Gln	Asn	Trp	Asp	Ile	Asn	Gly	Ala	Lys	Tyr
1				5					10					15	
Asp	Gly	Ser	Glu	Lys	Trp	Lys	Ala	His	Ser	Ser	Glu	Gln	Lys	Asp	Leu
			20					25					30		
Gly	Thr	Ile	Pro	Thr	Lys	Val	Glu	Gly	Arg	Ile	Gly	Asn	Arg	Glu	Asn
		35				40						45			
Ser	Leu	Asp	Val	Thr	Arg	Gly	Gly	Ala	Leu	Trp	Asp	Ile	Phe	Arg	Arg
50						55					60				
Glu	Asp	Ile	Pro	Lys	Leu	Gln	Asp	Tyr	Leu	Leu	Lys	His	Cys	Gln	Asp
65					70				75						80
Phe	Arg	His	Ser	Arg	Asn	Val	Ser	Val	Asp	Ser	Val	Val	His	Pro	Ile
				85					90					95	
His	Asp	Gln	Thr	Phe	Tyr	Leu	Asn	Glu	Gly	His	Lys	Lys	Lys	Leu	Lys
			100					105					110		
Glu	Glu	Tyr	Gln	Val	Glu	Pro	Trp	Thr	Phe	Glu	Gln	His	Leu	Gly	Glu
			115				120					125			
Ala	Val	Phe	Ile	Pro	Ala	Gly	Cys	Pro	His	Gln	Val	Arg	Asn	Leu	Lys
					130		135				140				
Ser	Cys	Ile	Lys	Val	Ala	Leu	Asn	Phe	Val	Ser	Pro	Glu	Asn	Leu	Gln
145					150					155					160
Glu	Cys	Ile	Arg	Leu	Glu	Asp	Glu	Leu	Arg	Leu	Leu	Pro	Lys	Asn	His
				165				170						175	

Arg

<210> 1139
 <211> 148
 <212> PRT
 <213> Pinus radiata

<400> 1139															
Gly	Pro	Arg	Glu	Met	Thr	Glu	Glu	Glu	Arg	Glu	Thr	Lys	Lys	Ala	Ala
1				5					10					15	
Ser	Val	Ala	Ala	Thr	Ala	Ala	Asp	Gln	Glu	Leu	Arg	Lys	Lys	Val	Leu

Abstract. We study the asymptotic behavior of the eigenvalues of the Dirac operator $D_{\mathbb{H}^n}$ on the hyperbolic space \mathbb{H}^n with a constant magnetic field. We show that the eigenvalues are asymptotically distributed according to a certain probability measure on the real line.

[illegible][illegible]

409

<212> PRT
 <213> Pinus radiata

<400> 1145
 Val Ser Ser Arg His Glu Phe Ala Val Ser Gln Met Ala Tyr Leu Gln
 1 5 10 15
 Ala Leu Arg Asn Ala Gly Ala Thr Leu Arg Gln Phe Ala Glu Leu Glu
 20 25 30
 Ser Met Glu Leu Gln Lys Thr Ser Pro Tyr Pro His Leu Arg His Tyr
 35 40 45
 Arg Val Thr Leu Pro Pro Ser Pro Pro Pro Leu Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro Leu Ser Leu Thr Pro Ser Pro Ser Tyr Gly Ser Ala
 65 70 75 80
 Thr Phe Pro Ser Ser Ile Pro Val Asn Arg Ser Ile Tyr Arg Cys Pro
 85 90 95
 Tyr Gln Gln Cys Ser Pro Ser
 100

<210> 1146
 <211> 153
 <212> PRT
 <213> Pinus radiata

<400> 1146
 Gln Leu Pro Asp Glu Ala Ile Ala Leu Ala Ala Ser His Ile Glu
 1 5 10 15
 Arg Glu Leu Gln Ile Thr Ser Trp Asn Leu Ser Cys Asn Phe Val Ala
 20 25 30
 Ser Thr Leu Gln Gly Arg Glu Cys Ile Glu Arg Leu Glu Ile Thr Gly
 35 40 45
 Ile Gly Asp Pro Ser Gly Arg Gly Leu Gly Phe Ser Tyr Leu Arg Val
 50 55 60
 Ala Pro Lys Pro Pro Ile Ser Ser Ala Leu Val Lys Lys Lys Ala Ala
 65 70 75 80
 Ala Ala Arg Gly Gly Ser Ala Val Thr Gly Thr Asp Ala Asp Leu Arg
 85 90 95
 Arg Leu Ser Met Asp Ala Ala Arg Glu Val Leu Leu Lys Phe Asn Val
 100 105 110
 Asp Glu Glu Gln Ile Glu Lys Met Thr Arg Trp His Arg Ile Ala Met
 115 120 125
 Val Arg Lys Leu Ser Ser Glu Gln Ala Ala Ser Gly Val Lys Val Asp
 130 135 140
 Ala Thr Ala Leu Asn Lys Phe Ala Arg
 145 150

<210> 1147
 <211> 73
 <212> PRT
 <213> Pinus radiata

<400> 1147
 Met Lys Ser Pro Ser Thr Ser Cys Leu Ser His Pro Val Glu Gly Glu
 1 5 10 15
 Gln Lys Ser Ile Asn Ser Glu Leu Trp His Ala Cys Ala Gly Pro Leu
 20 25 30
 Val Ser Leu Pro Ser Val Gly Ser Val Val Tyr Tyr Phe Pro Gln Gly

35 40 45
 His Ser Glu Gln Val Ala Ala Ser Thr Gln Lys Val Ala Asp Thr His
 50 55 60
 Ile Pro Asn Tyr Pro Asn Leu Pro Tyr
 65 70

<210> 1148
 <211> 213
 <212> PRT
 <213> Pinus radiata

<400> 1148
 Leu Lys Val Gln Trp Asp Glu Ile Ser Ala Ile Ala Arg Pro Glu Arg
 1 5 10 15
 Val Ser Pro Trp Lys Leu Glu Pro Ser Leu Thr Pro Val Ala Val Asn
 20 25 30
 Pro Leu Pro Val Ala Arg Gly Lys Arg Pro Arg Pro Asn Ile Leu Pro
 35 40 45
 Ser Ser Ser Asp Leu Ser Val His Asp Lys Ala Pro Val Asp Ser Thr
 50 55 60
 Gln Val His Arg Phe Pro Arg Val Leu Gln Gly Gln Glu Val Met Thr
 65 70 75 80
 Leu Gly Gly Ser Leu Gly Asp Gly Glu Leu Glu Ser Gly Gln Lys Met
 85 90 95
 Val Ala Trp Gly Gly Ser Lys Leu Asp Asp Val Lys Ala Glu Gly Met
 100 105 110
 Gly Cys Gln Arg Arg Leu Val Ser Glu Asn Trp Met Pro Pro Leu Arg
 115 120 125
 His Asp Ser Leu Tyr Ser Asp Thr Phe Ser Ser Phe Gln Pro Val Gly
 130 135 140
 Glu Val Gln Glu Phe Arg Gly Ser Leu Thr Asn Ser Ile Leu Glu Asp
 145 150 155 160
 Gly Gln Gln Pro Lys Leu Ser Arg Lys Gln Phe Gln Asp Gln Glu Gly
 165 170 175
 Lys Ile Val Asp Gly Ser Gly Leu Trp Ser Met Ser Phe Pro Asn Ser
 180 185 190
 Leu Gln Leu Cys Glu Ser Asn Arg Lys Met Ser Ala Thr Ser Ala Ala
 195 200 205
 Gln Ser His Lys Gln
 210

<210> 1149
 <211> 217
 <212> PRT
 <213> Pinus radiata

<400> 1149
 Glu Leu Thr Ser Asp Ser His Arg Gln Ala Thr Leu Gln Leu Glu Ala
 1 5 10 15
 Glu Val Thr Ala Trp His Ile Ser Phe Cys Ser Leu Ile Lys Ser Gln
 20 25 30
 Gln Asp Tyr Ile Cys Ala Leu Tyr Glu Trp Ala Arg Leu Ser Leu Val
 35 40 45
 Gln Leu Gly Asn Glu Ala Gln Trp Glu Arg Gly Asn Arg Pro Pro Ile
 50 55 60
 Tyr Thr Leu Cys Asp Val Trp Gln Gln Val Leu Lys Arg Leu Pro Asp
 65 70 75 80

Lys Val Ala Ser Glu Ser Ile Lys Ser Phe Ile Ser Val Val His Ala
 85 90 95
 Ile Val Met Gln Gln Ala Asp Glu Gln Lys Arg Lys Lys Lys Ala Glu
 100 105 110
 Asn Ile Ser Arg Glu Leu Gln Lys Lys Met Ile Ala Leu Arg Asn Ile
 115 120 125
 Glu Lys Lys Tyr Tyr Ser Ser Tyr Ser Ile Pro Ala Arg Ala Asp Ala
 130 135 140
 Thr Thr Glu Ser Gln Phe Glu Leu Gly His Thr Asp Pro Leu Ala Glu
 145 150 155 160
 Lys Arg Ala Glu Ile Glu Ile Tyr Lys Arg Arg Leu Glu Asp Glu Lys
 165 170 175
 Ala Asn Tyr Ser Lys Ser Ala Arg Gly Thr Arg Glu Met Thr Leu Asn
 180 185 190
 Asn Ile Gln Thr Gly Leu Pro Gly Leu Phe Gln Ala Leu Ser Ser Phe
 195 200 205
 Ser Ser Val Cys Ala Ser Ser Phe Glu
 210 215

<210> 1150
 <211> 33
 <212> PRT
 <213> Pinus radiata

<400> 1150
 Met Ala Met Gly Glu Ala Glu Arg Ile Thr Gly Pro Trp Ser Pro Glu
 1 5 10 15
 Glu Asp Thr Ser Leu His Lys Leu Val Glu Lys Ser Gly Pro Arg Asn
 20 25 30
 Trp

<210> 1151
 <211> 127
 <212> PRT
 <213> Pinus radiata

<400> 1151
 Trp Arg Pro Ala Lys Phe Ala Arg Asn Leu Leu Pro Asn Tyr Phe Lys
 1 5 10 15
 Pro Asn Asn Phe Ser Ser Phe Gly Arg Gln Leu Asn Thr Tyr Gly Phe
 20 25 30
 Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ser Asn Glu Phe Phe Arg
 35 40 45
 Lys Gly Glu Lys Gln Leu Leu Ser Glu Ile His Arg Arg Lys Gly Leu
 50 55 60
 Ile Gln Pro Pro Pro Pro Glu Asn Arg Ser Ile Ser Pro Ser Asn
 65 70 75 80
 Ser Gly Asp Glu Gln Thr Trp Ser Ser Thr Ser Ser Pro Asn Ser Ser
 85 90 95
 Thr Gly Val Asp Ala Leu Ser His Lys Asn Ala Ile Glu Glu Asn Glu
 100 105 110
 Lys Leu Arg Lys Glu Asn Leu Leu Leu Val Ser Glu Leu Thr Gln
 115 120 125

<210> 1152
 <211> 104

<212> PRT
<213> Pinus radiata

<400> 1152
Pro His Gly Leu Gln His His Ser Ser Asp Asp Ala Asn Gly Asp Gly
1 5 10 15
Asp Lys Arg Ile Gly Val Glu Thr Gly Ser Ser Val Cys Pro Glu Leu
20 25 30
Trp His Ala Cys Ala Gly Pro Leu Ile Ser Leu Pro Pro Lys Gly Ser
35 40 45
Arg Val Val Tyr Phe Pro Gln Gly His Leu Glu Gln Ile Ala Asp Asn
50 55 60
Glu Leu His Arg Gly Gly Arg Gly Ser Phe Leu Asn Ile Asn His Ala
65 70 75 80
Ala Ala Pro Met Ala Glu Glu Ala Ser Ser Ala Ala Ala Leu Asn Ile
85 90 95
Pro Pro Ser Phe Ile Ser Gln Pro
100

<210> 1153
<211> 146
<212> PRT
<213> Pinus radiata

<400> 1153
Glu Thr Leu Thr Leu Leu Lys Ile Arg Ser Glu Met Asp Ser Lys Phe
1 5 10 15
Arg Glu Ala Thr His Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ala
20 25 30
Leu Ala Glu His Gly Tyr Gln Arg Ser Ser Lys Lys Cys Arg Glu Lys
35 40 45
Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Lys Thr Lys Glu Gly Lys Ala
50 55 60
Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Ser Gln Leu Glu Ala
65 70 75 80
Leu Tyr Gly Gly Thr Thr Ile Asp Ala Ala Asp Ser Cys Phe Gly Val
85 90 95
Thr Thr Arg Thr Asn Leu Thr Glu Ser Pro Gly Leu Asp Phe Asn Gly
100 105 110
Asp Gly Ala Ser Gln Lys Tyr Ala Asp Thr His His Asn Ser Glu Gly
115 120 125
Phe Ser Leu Ser Ser Asp Ser Ser Ser Asp Asp Glu Tyr Ser His Asp
130 135 140
Ile Gln
145

<210> 1154
<211> 105
<212> PRT
<213> Pinus radiata

<400> 1154
Ile Phe Tyr Arg Leu His Cys Asn Leu Gly Glu Lys Ser Asn Lys Ile
1 5 10 15
Tyr Ile Cys Leu Phe Thr Met Glu Leu Ala Asp Glu His Ser Ile Leu
20 25 30
Arg Tyr Lys Lys Pro Lys Leu Ser Lys Asn Val Val Ser Glu Arg Arg

		35					40				45						
Arg	Arg	Gln	Lys	Met	Asn	Lys	Leu	Leu	Tyr	Thr	Leu	Arg	Ala	Leu	Val		
	50					55					60						
Pro	Asn	Ile	Ser	Lys	Met	Asp	Lys	Ala	Ser	Ile	Leu	Ala	Asp	Ala	Ile		
65					70					75					80		
Glu	Tyr	Val	Glu	Lys	Leu	Lys	Gln	Gln	Val	Glu	Arg	Ala	Glu	Ser	Asp		
				85					90					95			
Val	Gln	Ser	Thr	Asn	Val	Ser	Ala	Leu									
			100					105									

<210> 1155
 <211> 83
 <212> PRT
 <213> Pinus radiata

Arg	Glu	Phe	Asn	Ile	Asn	Ala	Asp	Val	Tyr	Ala	Gln	Asp	Ser	Ile	Glu		
1				5					10					15			
Leu	Leu	Lys	Gln	Ser	Gly	Ile	Asp	Phe	Glu	Lys	Asn	Glu	Glu	Lys	Gly		
			20					25					30				
Ile	Asp	Ser	His	Arg	Phe	Gly	Glu	Leu	Leu	Met	Ser	Ser	Gly	Val	Val		
		35					40					45					
Leu	Asn	Glu	Asn	Val	Asn	Trp	Ile	Thr	Phe	His	Ser	Gly	Tyr	Asp	Phe		
	50					55					60						
Gly	Tyr	Leu	Leu	Lys	Leu	Leu	Thr	Cys	Gln	Asn	Leu	Pro	Pro	Glu	Glu		
65					70					75					80		
Ser	Asp	Phe															

<210> 1156
 <211> 170
 <212> PRT
 <213> Pinus radiata

Met	Ala	Asn	Arg	Ser	Leu	Trp	Gly	Gly	Ser	Asp	Phe	Asp	Tyr	Glu	Asn		
1				5					10					15			
Glu	Ala	Asp	Thr	Arg	Lys	Gly	Pro	Trp	Thr	Val	Glu	Glu	Asp	Met	Gln		
			20					25					30				
Leu	Gly	Ile	Val	Asn	Leu	His	Gly	Glu	Gly	Arg	Trp	Asn	Phe	Leu	Ala		
		35					40					45					
Arg	Ala	Ser	Gly	Leu	Gln	Arg	Thr	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp		
	50					55					60						
Val	Asn	Tyr	Leu	Arg	Pro	Asp	Leu	Lys	Arg	Ser	Lys	Ile	Thr	Pro	Glu		
65					70					75					80		
Glu	Glu	Arg	Leu	Ile	Ile	Glu	Leu	His	Arg	Arg	Trp	Gly	Asn	Arg	Trp		
			85						90					95			
Ser	Arg	Ile	Ala	Gln	Ser	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys		
			100					105					110				
Asn	Phe	Trp	Arg	Thr	Arg	Met	Lys	Gly	Lys	Leu	Asn	Ser	Glu	Thr	Gln		
		115					120					125					
Lys	Asp	Ile	Ala	Gly	Val	Asp	Ala	Asp	Asp	Gly	Val	Gln	Phe	Glu	Ser		
	130					135				140							
Glu	Leu	Gly	Ser	Cys	Arg	Leu	Pro	Val	Ile	Ser	Ser	His	Ala	Leu	Pro		
145					150					155					160		
Glu	Val	Asp	Val	Ala	Glu	Pro	Ser	Ser	Thr								
				165					170								

<210> 1157
 <211> 119
 <212> PRT
 <213> Pinus radiata

<400> 1157

Gly	Thr	Val	Gly	Arg	Lys	Arg	Arg	Arg	Ile	His	Arg	Ser	Ser	Ile	Gly
1				5					10					15	
Val	Thr	Gly	Gly	Arg	Gly	Leu	Arg	His	Phe	Ser	Met	Lys	Val	Cys	Lys
		20						25					30		
Lys	Val	Glu	Ser	Lys	Gly	Trp	Thr	Thr	Tyr	Asn	Glu	Val	Ala	Ser	Glu
		35					40					45			
Leu	Val	Ala	Glu	Phe	Val	Asn	Pro	Asn	Ser	Thr	His	Leu	Ser	Gln	Asp
	50					55					60				
Gln	Gln	Gln	Phe	Asp	Glu	Lys	Asn	Ile	Arg	Arg	Arg	Val	Tyr	Asp	Ala
65				70					75						80
Leu	Asn	Val	Leu	Met	Ala	Met	Asp	Ile	Ile	Ser	Lys	Glu	Lys	Lys	Glu
				85				90						95	
Ile	Arg	Trp	Lys	Gly	Leu	Pro	Thr	Thr	Asn	Leu	Ser	Asp	Ile	Glu	Arg
			100					105					110		
Leu	Lys	Thr	Glu	Arg	Lys	Arg									

<210> 1158
 <211> 97
 <212> PRT
 <213> Pinus radiata

<400> 1158

Cys	Pro	Arg	Ala	Phe	Ala	Arg	Ala	Tyr	Asn	Leu	Lys	Thr	His	Met	Ala
1				5					10					15	
Thr	His	Asp	Pro	Asn	Arg	Leu	Lys	Pro	His	Val	Cys	Pro	His	Arg	Ser
		20						25					30		
Cys	Ala	Arg	Ser	Phe	Ser	Arg	Lys	His	Asp	Leu	Gly	Arg	His	Leu	Val
		35					40					45			
Ser	Ile	His	Arg	Asp	Asp	Ser	Val	Val	Ser	Thr	Pro	Ser	Ala	Ser	Met
	50					55					60				
Lys	Ser	Ile	Gly	Val	Asp	Ser	Gly	Arg	Arg	Ser	Trp	Cys	Asp	Asn	Cys
65				70					75						80
Gly	Lys	Gly	Thr	Ile	Gly	Ala	Ser	Cys	Gln	Cys	Ser	Cys	Ala	Asp	Ile
				85					90					95	

Lys

<210> 1159
 <211> 162
 <212> PRT
 <213> Pinus radiata

<400> 1159

His	Ala	Pro	Ile	Phe	Cys	Arg	Val	Ala	Arg	Asn	Phe	Gln	Leu	Arg	Val
1				5					10					15	
Ile	Leu	Lys	Glu	Asn	Arg	Arg	Arg	Glu	Thr	Phe	Asp	Gly	Phe	Leu	Arg
		20						25					30		
Glu	Asp	His	Glu	Lys	Val	Ser	Gln	Leu	Val	Thr	Gln	His	Tyr	Lys	Val
		35					40					45			

	35					40					45						
Arg	Asn	Arg	Thr	Arg	Leu	Trp	Leu	Gly	Thr	Phe	Asp	Thr	Ala	Glu	Glu		
	50					55					60						
Ala	Ala	Phe	Ala	Tyr	Asp	Thr	Ala	Ala	Tyr	Gln	Leu	Arg	Gly	Glu	Tyr		
65					70					75					80		
Ala	Arg	Leu	Asn	Phe	Pro	Asp	Leu	Arg	Tyr	Leu	Leu	Leu	Ser	Asn	Ser		
				85					90					95			
Asp	Asn	Gly	Ser	His	Asn	Val	Leu	Ser	Pro	Pro	Gly	Asn	Ala	Leu	Ser		
			100					105					110				
Val	Leu	Lys	Ser	Ser	Val	Asp	Ala	Lys	Leu	Gln	Ala	Ile	Cys	Gln	Arg		
		115					120					125					
Leu	Ser	Gln	Glu	Asn	Ser	Ser	Glu	Asn	Arg	Leu	Met	Ala	His	Ser	Ala		
	130					135					140						
Asn	Asn	Glu	Ala														
145																	

<210> 1162
 <211> 48
 <212> PRT
 <213> Pinus radiata

Phe	Leu	Glu	Ala	Leu	Glu	Lys	Arg	Glu	Glu	Asp	Arg	Met	Met	Arg	Glu		
1				5					10					15			
Glu	Ala	Trp	Lys	Arg	Gln	Glu	Met	Ala	Arg	Leu	Asn	Lys	Asp	Gln	Glu		
			20					25					30				
Leu	Arg	Ser	Gln	Glu	Arg	Ser	Met	Ala	Ala	Ser	Arg	Asp	Leu	Ala	Leu		
		35					40					45					

<210> 1163
 <211> 255
 <212> PRT
 <213> Pinus radiata

Val	Ala	Leu	Ser	Asn	Asn	Pro	Leu	Ile	Phe	Ser	Ala	Lys	Val	Glu	Asn		
1				5					10					15			
Gly	Thr	Pro	Ser	Tyr	Asp	Gly	Leu	Lys	His	Ala	Asn	Thr	Asn	Pro	Met		
			20					25					30				
Pro	Phe	Ser	Gly	Leu	Gly	Asn	Val	Ser	Met	Gly	Pro	Leu	Phe	Tyr	Gln		
		35				40						45					
Ala	Asn	Pro	Ile	Gln	Arg	Val	Lys	Arg	Val	Arg	Asp	Thr	Ser	Phe	Ile		
	50					55					60						
Met	Gly	Pro	Pro	Ser	Ser	Pro	Phe	Gly	Arg	Met	Gly	Val	Asn	Gly	His		
65				70					75					80			
Met	Gly	Met	Asn	Asp	Val	Ser	Lys	Ser	Leu	Gln	Pro	Gly	Phe	Lys	Ala		
			85						90					95			
Arg	Val	Pro	Tyr	Pro	Leu	Gln	Ala	Ala	Arg	Ser	Asp	Ser	Phe	Val	Ala		
			100					105					110				
Gln	Gly	Cys	Phe	Pro	Tyr	Asp	Pro	Asn	Leu	Ser	Ser	Thr	Ser	Asn	Leu		
		115					120					125					
Pro	Leu	Gly	Gly	Phe	Ser	Ser	Gly	Ser	His	Ala	Val	Met	Asn	Gly	Thr		
	130					135					140						
Phe	Ser	Ser	Ser	Arg	Leu	Phe	Ser	Gly	Gln	Lys	Leu	Glu	Leu	Pro	Ser		
145				150					155					160			
Ser	Gln	Phe	Ala	Glu	Ser	Val	Gln	Thr	Ala	Gly	Ser	Ser	Ile	Asn	Pro		
				165				170						175			

Val	Leu	Asn	Arg	Ser	Thr	Pro	Leu	Leu	Leu	Pro	Pro	Val	Pro	Thr	Gln
			180					185					190		
Thr	Ile	Asn	Gln	Val	Asp	Tyr	Ser	Phe	Ser	Thr	Pro	Lys	Asn	Ser	Gly
		195					200					205			
Leu	Leu	Glu	Ser	Met	Phe	Gln	Glu	Ala	Gln	Thr	Met	Gly	Gly	Val	Lys
		210				215					220				
Ala	His	Ser	Ser	Ser	Asn	Ser	Ser	Ile	Asp	Leu	Gln	Gly	Gly	Ser	Lys
225					230					235					240
Ser	Ser	Ile	Ser	Asn	Pro	Leu	Asn	Asn	Gly	Phe	Leu	Cys	Arg	Ser	
				245					250					255	

<210> 1164
 <211> 147
 <212> PRT
 <213> Pinus radiata

<400> 1164

Ile	Arg	Met	Glu	Glu	Pro	Leu	Gln	Ile	Ile	Asn	Ser	Ser	Pro	Ile	Gln
1				5					10					15	
Gln	Gln	His	Asp	His	Asp	Asp	Asp	Asp	His	Gly	His	Gly	His	Glu	Glu
			20				25						30		
Glu	Val	Ile	Pro	His	Pro	Leu	Leu	Pro	Pro	Pro	Gly	Asp	Thr	Cys	Ile
		35				40						45			
Val	Pro	Tyr	Ile	Met	Pro	Val	Ser	Thr	Ser	Thr	Ala	Glu	Lys	His	Pro
	50				55						60				
Pro	Gln	Pro	Thr	Asn	Ile	Ala	Phe	Asn	Gly	Pro	Glu	Thr	Glu	Glu	Asp
65				70					75						80
Asp	Lys	Lys	Arg	Asp	Arg	Glu	His	Lys	Lys	Arg	Ser	Lys	Asn	Trp	Thr
			85					90						95	
Arg	Val	Glu	Thr	Leu	Lys	Leu	Ile	Lys	Leu	Arg	Thr	Glu	Phe	Glu	Pro
		100					105						110		
Arg	Phe	Ser	Arg	Ser	Gly	Arg	Lys	Thr	Glu	Leu	Trp	Asp	Glu	Ile	Ala
		115				120						125			
Glu	Ser	Leu	Arg	Lys	Glu	Gln	Phe	Phe	Arg	Asp	Ala	Gln	Gln	Cys	Arg
	130					135					140				
Asp	Lys	Trp													
145															

<210> 1165
 <211> 202
 <212> PRT
 <213> Pinus radiata

<400> 1165

Met	Asp	Gln	Gln	Gln	Pro	Thr	Ile	Pro	Ala	Leu	Pro	Gln	Val	Gly	Tyr
1				5					10					15	
Gly	Thr	Asn	Pro	Tyr	Ile	Ala	Pro	Pro	Ile	Gly	Gly	Pro	Pro	His	Pro
		20					25						30		
Gln	Leu	Ala	Ser	Tyr	His	Gln	Gln	Leu	Gln	Ala	Phe	Trp	Gly	Asn	Gln
		35				40						45			
Met	Arg	Glu	Val	Glu	Gln	Ala	Gln	Asp	Phe	Lys	Thr	His	Ser	Leu	Pro
	50				55						60				
Leu	Ala	Arg	Ile	Lys	Lys	Ile	Met	Lys	Ala	Asp	Glu	Asp	Val	Lys	Met
65				70					75						80
Ile	Ser	Ala	Glu	Ala	Pro	Val	Val	Phe	Ala	Lys	Ala	Cys	Glu	Met	Phe
			85				90						95		
Ile	Leu	Glu	Leu	Thr	Leu	Arg	Ser	Trp	Ile	His	Thr	Glu	Glu	Asn	Lys

			100					105				110				
Arg	Arg	Thr	Leu	Gln	Lys	Asn	Asp	Ile	Ala	Ala	Ala	Ile	Gly	Arg	Thr	
		115					120					125				
Asp	Ile	Phe	Asp	Phe	Leu	Val	Asp	Ile	Val	Pro	Arg	Asp	Glu	Phe	Lys	
		130					135				140					
Asp	Glu	Gly	Leu	Val	Ile	Pro	Arg	Ala	Ala	Gly	Ala	Val	Pro	Phe	Met	
145					150					155					160	
Gly	Pro	Gly	Asp	Asn	Val	Pro	Ser	Tyr	Tyr	Tyr	Val	Ala	Gln	Gln	Ala	
				165				170						175		
Pro	Asn	Val	Ala	Ala	Tyr	Ala	Pro	Pro	Thr	Gln	Gln	Met	Arg	Ser	Lys	
			180					185					190			
Ala	Pro	Ala	Pro	Pro	Pro	His	Gly	Ser	Ser							
		195					200									

<210> 1166

<211> 143

<212> PRT

<213> Pinus radiata

<400> 1166

Gln	Gly	Ser	Leu	Thr	Leu	Pro	Arg	Thr	Leu	Ser	Arg	Arg	Thr	Val	Asp	
1				5					10					15		
Asp	Val	Trp	Arg	Glu	Ile	His	Lys	Glu	Asn	Ile	Asp	Gly	Asn	Gly	Asn	
			20					25					30			
Ala	Pro	Ala	Asn	Gln	Ala	Arg	Gln	Pro	Thr	Phe	Gly	Glu	Met	Thr	Leu	
		35				40					45					
Glu	Asp	Phe	Leu	Val	Lys	Ala	Gly	Val	Val	Arg	Glu	Asp	Ala	Glu	Gln	
50					55					60						
Gly	Asp	Gly	Gln	Ser	Phe	Gly	Ala	Phe	Arg	Asn	Ala	Leu	Asp	Gly	Glu	
65				70					75						80	
Phe	Val	Ala	Asn	Leu	Ala	Glu	Arg	Asn	Gly	Asp	Asn	Arg	Leu	Gly	Ile	
			85					90					95			
Gly	Asn	Ser	Leu	Gly	Leu	Gly	Phe	Gly	Glu	Arg	Gly	His	Arg	Asn	Gly	
			100				105					110				
Glu	Val	Gly	Ser	Asn	Lys	Ser	Gly	Ala	Gly	Gly	Val	Pro	Gly	Leu	Ser	
		115				120						125				
Leu	Ser	Pro	Thr	Asn	Val	Phe	Leu	Ile	Met	Leu	Pro	Trp	Ile	Trp		
		130				135					140					

<210> 1167

<211> 90

<212> PRT

<213> Pinus radiata

<400> 1167

Phe	Gln	Arg	Arg	Lys	Lys	Lys	Ser	Ile	Gly	Arg	Gly	Cys	Leu	Lys	Thr	
1				5					10					15		
Ser	Ile	Asn	Asp	Val	Glu	Gln	Leu	Lys	Ala	Glu	Lys	Leu	Leu	Leu	Lys	
		20						25					30			
Ser	Arg	Ile	Glu	Lys	Lys	Ala	Ser	Tyr	Phe	His	Glu	Leu	Glu	Glu	Gln	
		35				40					45					
Ile	Ile	Gly	Leu	Gln	Asn	Leu	Val	Lys	Arg	Asn	Glu	His	Arg	Tyr	Ser	
50					55					60						
Ser	Gly	Asn	Thr	Pro	Ser	Gly	Gly	Val	Ser	Leu	Pro	Phe	Ile	Leu	Val	
65				70					75						80	
Gln	Thr	His	Pro	Arg	Ala	Thr	Val	Glu	Ile							
				85				90								

<210> 1168
 <211> 105
 <212> PRT
 <213> Pinus radiata

<400> 1168
 Gly Ile Arg Arg Ala Thr Arg Gln Lys Ser Gly Ile Leu Ser Ser Val
 1 5 10 15
 Leu Ser Asn Gln Asn Ala His Leu Ser Val Leu Ala Ala Ala Ser
 20 25 30
 Ala Val Ala Thr Lys Ser Met Phe His Val Phe Tyr Asn Pro Arg Thr
 35 40 45
 Ser Pro Ala Glu Phe Ile Ile Pro Tyr Gln Lys Tyr Val Lys Ser Cys
 50 55 60
 Lys Gln Pro Leu Ser Ile Gly Met Arg Phe Lys Met Arg Phe Glu Thr
 65 70 75 80
 Glu Asp Thr Ala Glu Arg Arg Tyr Thr Gly Met Ile Thr Ala Ile Gly
 85 90 95
 Asp Ala Asp Pro Ala Arg Trp Pro Gly
 100 105

<210> 1169
 <211> 106
 <212> PRT
 <213> Pinus radiata

<400> 1169
 Gln Asp Thr His Ser Glu Pro Met Ala Met Glu Met Gly Leu Val Ile
 1 5 10 15
 Asp Gly Asp Arg Phe Ser Ser Glu Gly Asp Gly Asp Ile Met Leu Asp
 20 25 30
 Gly Glu Asp Leu Leu Pro Glu Ile Asn Asp Met Phe Trp Glu Gln Phe
 35 40 45
 Leu Ala Glu Ser Ala Thr Ser Gly Gly Thr Glu Glu Ala Glu Ser Ala
 50 55 60
 Ala Gln Glu Ser Leu Thr Lys Asp Gln Asp Glu Lys Pro Ser Glu Asn
 65 70 75 80
 Gly Asn Trp Trp Lys Lys Asn Gln Asn Met Asp Asn Leu Thr Glu Gln
 85 90 95
 Met Gly Gln Leu Ala Ser Glu Ser Asn Pro
 100 105

<210> 1170
 <211> 144
 <212> PRT
 <213> Pinus radiata

<400> 1170
 Asp Gly Ala Val Arg Asp Ala Gly Arg Leu Val Pro Ala Pro Phe Leu
 1 5 10 15
 Val Lys Met Tyr Arg Leu Val Asp Asp Pro Ser Thr Asn His Ile Val
 20 25 30
 Ser Trp Gly Glu Asn Asn Asn Ser Phe Val Val Trp Arg Pro Lys Glu
 35 40 45
 Phe Ser Ala Ser Val Leu Pro Cys Tyr Phe Asn His Ala Asn Phe Ser
 50 55 60

Ser Phe Val Arg Gln Leu Asn Asn Tyr Gly Phe Arg Lys Thr Phe Arg
65 70 75 80
Gly Gln Cys Glu Phe Ser Asn Lys Leu Phe Glu Lys Gly Lys Gln Tyr
85 90 95
Leu Leu Cys His Ile His Arg Arg Arg Ala Ser Asn Ser Ser Pro Met
100 105 110
Pro Met Glu Tyr Gly Lys Ser Ser Leu Leu Phe Pro Ile Ile Leu Pro
115 120 125
Thr Gln His Ser Asn Val Leu Ala Ala Pro Leu Pro Ser Ser Leu Ser
130 135 140

<210> 1171
<211> 62
<212> PRT
<213> Pinus radiata

<400> 1171
Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu Arg Lys Lys Cys
1 5 10 15
Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr Pro Pro Ala Gln
20 25 30
Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln Leu Val Ile Arg
35 40 45
Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser Pro Arg
50 55 60

<210> 1172
<211> 88
<212> PRT
<213> Pinus radiata

<400> 1172
Asp Pro Asn Ala Pro Lys Lys Ala Met Thr Gly Phe Met Phe Phe Ser
1 5 10 15
Gln Val Glu Arg Glu Asn Leu Lys Lys Ser Asp Pro Gly Met Ala Phe
20 25 30
Thr Asp Val Gly Arg Thr Leu Gly Glu Arg Trp Lys Lys Met Ser Ala
35 40 45
Glu Glu Lys Ala Pro Tyr Glu Ser Lys Ala Arg Ala Asp Lys Glu Arg
50 55 60
Tyr Lys Glu Ala Met Ala Asp Tyr Lys Ser Gly Pro Thr Asn Val Asp
65 70 75 80
Ser Gly Asn Glu Ser Asp Ser Glu
85

<210> 1173
<211> 106
<212> PRT
<213> Pinus radiata

<400> 1173
Leu Leu Phe Gly Val Asn Ile Asp Ser Ser Ser Leu Ile Val Pro Asn
1 5 10 15
Thr Val Ser Asn Met Arg Ser Ile Gly Ser Ser Thr Asp Ala Val Met
20 25 30
Gln Phe Gly Val Ser Asn Tyr Leu Asn Ala Pro Pro Cys Ala Ser Gly
35 40 45

<213> Pinus radiata

<400> 1178

Lys	Lys	Ala	Ser	Glu	Trp	Gly	Glu	Ser	Val	Val	Ser	Thr	Ser	Glu	Asn
1				5					10					15	
Ser	Asn	Asp	Leu	Asp	Pro	Pro	Thr	Tyr	Ser	Glu	Thr	Ser	Ser	Pro	Ala
			20					25					30		
Gln	Gly	Ser	Asp	Pro	Arg	Val	Phe	Pro	Cys	Asn	Phe	Cys	Gln	Ser	Lys
			35				40					45			
Phe	Tyr	Ser	Ser	Gln	Ala	Leu	Gly	Gly	His	Gln	Asn	Ala	His	Lys	Arg
			50			55					60				
Glu	Arg	Thr	Leu	Ala	Arg	Arg	Ala	Gln	Arg	Met	Gly	Ser	Phe	Ala	Gln
65					70					75					80
Arg	Tyr	Ser	Ser	Met	Ala	Ser	Leu	Pro	Leu	His	Gly	Ser	Ser	Glu	Thr
				85					90					95	
Ser	Trp	Thr	Pro	Ser	Arg	Phe	Leu	Gly	Ile	Lys	Ala	His	Ser	Leu	Ile
			100					105						110	
His	Lys	Pro	Phe	Pro	Glu	Gly	Asp	Asn	Leu						
			115				120								

<210> 1179

<211> 113

<212> PRT

<213> Pinus radiata

<400> 1179

Met	Thr	Gln	Ala	Thr	Asn	Tyr	Thr	Ala	Gly	Thr	Ile	Arg	Asp	Asp	Gln
1				5					10					15	
Glu	Glu	Gln	Cys	Val	Arg	Arg	Gly	Pro	Trp	Thr	Val	Asp	Glu	Asp	Met
			20					25					30		
Ser	Leu	Ile	Arg	Cys	Val	Thr	Thr	Arg	Gly	Glu	Gly	Arg	Trp	Asn	Thr
			35				40					45			
Val	Ala	Lys	Phe	Ala	Gly	Leu	Lys	Arg	Thr	Gly	Lys	Ser	Cys	Arg	Leu
			50			55					60				
Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp	Val	Lys	Arg	Gly	Asn	Ile	Thr
65					70					75					80
Pro	Glu	Glu	Gln	Leu	Leu	Ile	Leu	Glu	Leu	His	Arg	Leu	Trp	Gly	Asn
				85				90						95	
Arg	Trp	Ser	Lys	Ile	Ala	Arg	Gln	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu
			100					105						110	
Ile															

<210> 1180

<211> 76

<212> PRT

<213> Pinus radiata

<400> 1180

Met	Arg	Arg	Pro	Gln	Arg	Lys	Lys	Lys	Thr	Asp	Ala	Glu	Asp	Asp	Phe
1				5					10					15	
Asp	Glu	Cys	Tyr	Tyr	Thr	His	Met	Cys	Lys	Ile	Cys	Lys	Lys	Lys	Phe
			20					25					30		
Val	Ser	Gly	Arg	Ala	Phe	Gly	Gly	His	Met	Arg	Ile	His	Gly	Pro	Val
			35				40					45			
Ala	Thr	Ala	Ala	Ala	Ala	Ala	Ala	Glu	Ser	Asn	Gly	Lys	Asn	Leu	Glu
			50			55					60				

Pro Gln Arg Lys Arg Ser Arg Ala Glu Glu Ile Arg
65 70 75

<210> 1181
<211> 130
<212> PRT
<213> Pinus radiata

<400> 1181
Val Gly Cys Lys Gly Ser Asp Ala Phe Glu Glu Ser Leu Lys His Phe
1 5 10 15
Cys Arg Val Cys Lys Arg Arg Phe Ala Cys Gly Arg Ala Leu Gly Gly
20 25 30
His Met Arg Val His Gly Ala Glu Leu Gly Ala Ile Lys Gly Gly Gly
35 40 45
Leu Glu Glu Gln Phe Glu Lys Gly Arg Val Lys Glu Pro Ser Arg Ser
50 55 60
Cys Gly Asp Ser Val Lys Glu Gly Val Gln Asp Glu Val Glu Gly Leu
65 70 75 80
Asn Ser Met Tyr Thr Leu Arg Arg Asn Pro Lys Arg Ser Trp Arg Phe
85 90 95
Ala Asp Gln Asp Tyr Ser Phe Ala Phe Gly Gly Val Asp Gly Ser Gly
100 105 110
Ala Lys Arg Phe Gly Ser Thr Phe Leu Arg Asp Ser Arg Val Cys Glu
115 120 125
Glu Cys
130

<210> 1182
<211> 86
<212> PRT
<213> Pinus radiata

<400> 1182
Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu
1 5 10 15
Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu
20 25 30
Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp
35 40 45
Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys
50 55 60
Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu
65 70 75 80
Arg Ile Ala Ala Gly Glu
85

<210> 1183
<211> 462
<212> DNA
<213> Eucalyptus grandis

<400> 1183
acaaacaaac aaacaagacg gaacgagatg aagacggttc agtcgaagaa gttcaggggc 60
gtcagacagc gtcactgggg ctcttggggt tccgaaattc gccatcctct gttgaagaga 120
agggtgtggc tgggcacggt cgagacggct gaggaggcgg cagagccta cgaccaggcc 180
gccatcttga tgagtggcgc caatgcaaag accaacttcc cgacatctca aaccacgaac 240

ggcgacccccg	ccgctgccaa	ttccttgtct	tctcgaagc	acttgctgga	gacccctccac	300
gcgaantcaa	ganatgcagc	aagacgccgt	cgccatccct	cacctgccta	aggctcgaca	360
ctgagaactc	ccacatcgga	gtctggcaga	aggggtgccg	ccagcgtcag	actcaactgg	420
gtatgaccgt	acagtcggaa	caaaaatccg	atccattggt	ag		462

<210> 1184
 <211> 340
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1184						
gactccccct	atccccctctc	tttctccctc	tcaagaatca	agagattact	atggaaagcg	60
aacgctacga	tgagacgaca	gaggggcagc	gaatcaagag	aaggccgcac	cagcagcagc	120
agcagcagca	gcagcggcgg	cagaagcctt	acaggggtat	ccggatgagg	aagtggggca	180
agtgggtggc	cgagatcagg	gagcccaaca	agcgtctccg	catctggctc	ggctcctatg	240
ccacccccgt	ggccgcgcgc	cgcgccctacg	acaccgccgt	cttctacctc	cgcgggccct	300
ccgcccgcct	caacttcccc	gacctcatct	ggcgcgaggg			340

<210> 1185
 <211> 190
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1185						
cttgggggttg	acatggcgcg	acgtggcgga	ggaaggaggg	gaacggcggc	tccgaggcgt	60
ccgacgccgt	cttgccgcga	gctcatcatc	gccatcgta	caagggagtg	aggatgcgga	120
agtgggggaa	gtgggtggcg	gagatacggc	agcccaacag	ccgggaccgc	atctggctcg	180
gctcctacgc						190

<210> 1186
 <211> 473
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1186						
aacaaaggtn	tgtgtatgga	accattcttg	atagcattgc	aaaggttact	ggaattgtga	60
agtttgatct	gcatgctgag	ccagaggaag	gaaaaaagaa	gattgaggtc	ggaggaaatg	120
ttgcagggtg	gtttgacctt	ggaccaggta	gaattnggtt	ctgaagctgt	ttttgtccct	180
cgagagcctg	gcatcacttc	tgaagaagat	gatgggtacc	tgatattctt	tgtccatgat	240
gaaagcacag	ggaagtcggc	agtaaagtga	attgatgcga	aaaacatgtc	atctgatcct	300
gttgctgtcg	ttgaattacc	ccataggggt	ccttatggct	tccatgcctt	cttcgtgact	360
gaggaacaac	ttcaggaact	ggctaagctg	taggtctcta	catgcacgaa	ttgttgggaa	420
tgcagatgtt	gcgaggggag	gcatactctt	ggaaagctgc	tacagttgat	cta	473

<210> 1187
 <211> 333
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1187						
accagatcca	gatgcagagg	tcattgcact	atcgccaaag	acgctcatgg	cgacgaacag	60
gttcgtttgc	gagatatgca	acaaaggctt	ccagagggac	cagaacctgc	agctgcaccg	120
gagggggccac	aacctgccat	ggaagctccg	gcagaggagc	aaggagatcg	tcaagaagaa	180
ggtttatata	tgccctgaga	agacgtgcgt	gcaccacgac	ccttcaaggg	cacttggcga	240
cctcactggg	atcaagaagc	acttcagccg	gaagcatggc	gagaagaagt	ggaagtgtga	300
gaagtgtctg	aagaagtacg	cagtccagtc	aga			333

<210> 1188
 <211> 420
 <212> DNA
 <213> Eucalyptus grandis

<400> 1188
 taaaaacat gcagtctctc agccactgaa catggcgctt gaagctctca actcgccac 60
 cgccgcccgc ccttcggcc acgacgacgc ggacggccac ccgtgggcca aacggaagcg 120
 ctccaagcgc ccccgcgcg accctcagga ccagccctcc gaggaggagt acctggccct 180
 ctgectcatc atgctcgccc gccgcccgcg ccgaccgggc agcagcggca ggctccacga 240
 gtgctccatc tgccacaagg ccttccccac cggccaggcc ttgggcgggc acaagcgggtg 300
 ccactacgac ggcggcagca gtagcagcgc cgcccggtgt gctcttcct cagaagccgg 360
 cggtcctagc cacacgactg tcagccaccg cgagccgacg gacttgaact tgccggcctt 420

<210> 1189
 <211> 365
 <212> DNA
 <213> Eucalyptus grandis

<400> 1189
 tgacgccgag cgacgtgggg aagctgaacc ggctgggtgat cccgaagcag cacgcggaga 60
 agcacttccc gctgccgggc gggccggcgg cgacgatgaa gggcgactg ctcaacttcg 120
 aggacgtcgg cgggaagggtg tggcggttcc ggtattcgta ctggaacagc agccagagct 180
 acgtgctcac caagggttgg agccgggttcg tgaaggagaa gagcctgaag gccggcgaca 240
 ccgtntgctt ccagcggtcg accggggccgg acaagcagct ntacatcgac ttcaagccgc 300
 ggggccagcc gccggccggc ccggccgcgc cgccgcgcgc gcccgtagc atggtgaggg 360
 tgctt 365

<210> 1190
 <211> 434
 <212> DNA
 <213> Eucalyptus grandis

<400> 1190
 atcacttcaa caccatgacc ttacaaaaac aaagcaattg ttagaaccat ggttgctcaa 60
 ctgaagaact tcgatgctgc gctacaagaa ttggaggaga agaagaagaa cgaagtcgac 120
 cctagctcga gcatcggttc gtggatgtgg aaccctagt cgcgccagga ggatgatgac 180
 tcgtgggagg tgagagcctt cgccgaagac actagcaaca ttatgggccc aacctggccg 240
 ccgaggtcct acacttgctc tttctgtaga agggagttcc ggtccgccc aacctcgcc 300
 ggccacatga atgtccaccg cagagaccgt gctaagcttc accaatcaca attccggccg 360
 ctggcgaacc aaaattctcc tttcgcttct tgctcttccc cgctctctc gactctgcta 420
 ttcccgaaac aaga 434

<210> 1191
 <211> 479
 <212> DNA
 <213> Eucalyptus grandis

<400> 1191
 gaatcgtttc ttggactttc ttgagctgct cttttcgctt catttctcaa gtgcgtgaaa 60
 accaaaaaaa tggtaggggg gaagactcag atgaggaggga tagagaacaa gacgagcagg 120
 caagtgacct tctcgaagcg tcggaacggg ctgctcaaga aggccttcga gctctcggtt 180
 ctttgcatg ctgaagtcgc cgccatcatt ttctctccta ctggaaaact ttatgagttc 240
 tctacctcaa gcatgagcag cataatagaa cgatatcaaa ggaaaacaaa ggaccggggg 300
 tgcagcgaga aaactaccga aatcgatttg cagaatatga agggaaactc tctagacatg 360
 gcaaagatga tcgaacttct caacgtttcc aacagtcggc tctcaggaga actttcagat 420
 acgtgttcag ttgaggagct acaatcaaca cagaacctgt tagagagaag cttatccaa 479

<210> 1192
 <211> 310
 <212> DNA
 <213> Eucalyptus grandis

<400> 1192
 ccctcttcct cttcctctcc ctctctctgt cgcagagctc cgtctgaact cgcagaatcc 60
 acgcgcagag cgacccaaga gtgtttcaga acagtccgtc catggccttg gaagctatca 120
 actctcccac cgcgccctca gcgcgcgttc agttcatgga ggagcccttg agctcccgtc 180
 tcttgagacc cctgaacaag cgcaagcgct ccaagcgccc ccaccaccct ccctccgaag 240
 atgagtacct cgccctctgc ctcatcatgc tcgcccgcag cggcgccgcc cccaagccca 300
 accaccacgc 310

<210> 1193
 <211> 466
 <212> DNA
 <213> Eucalyptus grandis

<400> 1193
 tttttttttt tttttattca aaaacaaaat ctacttgcc ctttcttaat atatagtagc 60
 caaagccttc tggagatcac cttttatcag ctaccaccag tcagataggt ctattgaata 120
 tgcttgattg ctggttcctc aagcatatgc aactacaaag actcccatat caaagcacta 180
 gctgcatata cacttttaag ctaactaaca agagaattta aaaagaaaat cctcgctgca 240
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 gaccattatc aggcattgccc atccctgcag ctaactcagc atcaagctga gtatgtggcg 360
 caggacccat catttgcttc atacgtttct tgtggcgctt cgtcttgaaa tgctcgctcc 420
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<210> 1194
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 <212> DNA
 <213> Eucalyptus grandis

<400> 1194
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 ccacaaccac cgccaccgcc ttccaccacc aagaaaaaga ggaatctccc tggaatgccc 180
 gatccagatg cagaggtgat agctctgtct cccacgacct tattggccac caacaggctc 240
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<210> 1195
 <211> 337
 <212> DNA
 <213> Eucalyptus grandis

<400> 1195
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 gtcgcagtcg tcgcagtcgg agtcctccgc gagccacgcc gcgtgctccg acgaggagcc 180
 ggccgtggcg ctggcttcca gccggcccaa gaggcggctt gggcggaagg tcttcaagga 240
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 gctccgggag cccaacaaga agaccggggt atggctc 337

<210> 1196
 <211> 450
 <212> DNA

<213> Eucalyptus grandis

<400> 1196

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cgacgagatg	atgatgaaga	aggggagcga	cgganggata	gcggaggtga	atcccacgcc	180
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gacccctccc	gtcaccgacc	tccccgtcgt	cggccatctc	cctgattgct	tgaatggaga	360
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<210> 1197

<211> 351

<212> DNA

<213> Eucalyptus grandis

<400> 1197

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ctgtccaacg	ggagtagcgc	catggcagcc	cccgggaact	tctccgacga	ggaggtgcgc	240
ctcgctccc	accacccaaa	gaagcgcgcc	gggaggaaga	agttccggga	gacgcgccac	300
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<210> 1198

<211> 359

<212> DNA

<213> Eucalyptus grandis

<400> 1198

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gccgcgcgcg	ccgcctcctc	ctcctcctcc	gcctacgacc	tccccctcgc	cgagccctgg	240
gccaagcgca	agcgtccaa	gcgccccac	aaccgcctc	ccgaggacga	gtacctcgcc	300
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<210> 1199

<211> 645

<212> DNA

<213> Eucalyptus grandis

<400> 1199

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cattcttggc	tttgaagccc	aagaagctgc	gtttcgggga	ggctgcttct	ctgccgtggg	480
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cgtcttaagt	ggtgctgggt	gcgtcgccac	actcataata	cagctagctt	aaggaagttt	600
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<210> 1200

<211> 376
<212> DNA
<213> Eucalyptus grandis

<400> 1200
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 aaagccagca gctagcacag gatgtcaaga ttcacctcca aaccgataaa gtcgacatgg 180
 ctctattaat ccagccaaga tatagagccc cctccctctg ctcgattctg taattcccgt 240
 gatactgctt cagcatatcg agcacagcac gagtaaccga tgcgtccact ggtagctgat 300
 tgaaaccggc catttggaat ctggaccgcc atttgccgaa aagctcatgc ctttccatcc 360
 tctcangccc atcaca 376

<210> 1201
<211> 461
<212> DNA
<213> Eucalyptus grandis

<400> 1201
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 ttgatgctga ggcgcgaaaa gaaacagttg gagaaagaag ggaaggttc gcgcaagaag 180
 ctgcaacatc agaacctatc acttgcagaa aaatcaccgg aagacgacct ttcaaagtgc 240
 aataacaaca atgcaaatgg cagcccaagc cagaaaaagg tgggcaatga tggttccgac 300
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 ttgctacatg atgccaccca gaatatctca ggcagagggc t 461

<210> 1202
<211> 447
<212> DNA
<213> Eucalyptus grandis

<400> 1202
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 ccgacgagac cctcccgtc accgacctcc ccgtcgtcgg ccactctcct gattgcttga 240
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 ggtttgatgg agatggcatg gttcatggga tgcggataaa aaatggcaaa gctacttacg 360
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<210> 1203
<211> 454
<212> DNA
<213> Eucalyptus grandis

<400> 1203
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 gaccaaccac cgcataatcc gccttcttct tcttcttctt cttcttcttc ttcttcttca 180
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 tcgtcgccgc tggctcaatc cacagggagg caccgcgttt accgtggagt ccggtcccgc 300
 agcgggaagt ggggtctccga gatccgcgag ccccgcaaga ccaccgcat ttggcttggg 360
 acatacccga atcccagat ggccgcgcgc gcctttgacg tggccgcgct ggctctgaaa 420
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<213> Eucalyptus grandis

<400> 1208

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ataccaaaat	cgataaatatg	cagtttcgtc	gctttctcag	atatgcttaa	aatcatatgg	180
ttagaataga	tgatcgcaaa	cctctgaaat	gggaaaactg	agagataaag	tcggtaagct	240
ttcaacattt	cagtagcaga	tttccttttg	gagcctaact	ccgtatagac	ttgcgctcct	300
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<210> 1209

<211> 405

<212> DNA

<213> Eucalyptus grandis

<400> 1209

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gggctgggga	ttggggggag	gaatgggggc	gcagcacaac	tcaggacgaa	cccggaatgg	180
gagacccatg	tgatcctgaa	cgtgtacgat	ctcaccctcg	cgaacagcta	caccgcctgg	240
tgccggcctg	gcatcttcca	ttccggcatt	caagggtctc	tgtgtagttg	cattcttcca	300
gaaagccttc	aagtaactac	tgttaagcca	gagtatcatg	acttctccga	ggaagatggg	360
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<210> 1210

<211> 521

<212> DNA

<213> Eucalyptus grandis

<400> 1210

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gccagcacia	cctcctcctc	aatttcaacc	ccaccgacga	cgaccgcgaa	gacgagggct	180
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agctgagctt	cgaggacgag	tccgggaagt	gggtggaggtt	ccgtactcc	tactggagca	420
gcagccagag	ctacgtcctc	accaagggct	ggagccgctt	cgtcaaggac	aagcgctcgc	480
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<210> 1211

<211> 537

<212> DNA

<213> Eucalyptus grandis

<400> 1211

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gaaggcgtgc	gactcgtgca	agaccgcggc	ggcgcccggt	ttctgccg	ccgacgcggc	180
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ggacgccg	gcgtctgtgc	tcacctgcga	cgccgacatc	cactccgcca	acccctcgc	360
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ggccgcctcc	gccttcaact	tcctcgccgt	gcctaccaag	accggcagcg	ccgacacgtg	480
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<210> 1212

<211> 399
 <212> DNA
 <213> Eucalyptus grandis

<400> 1212
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 tccatctgct ccgatggcg gttcggaggg gatgaattct tgaaaaacaa ggaggaacga 180
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 caggacgaac ccggaatggg agacccatgt gatcctgaac gtgtacgac tcacccccgc 300
 gaacagctac accgctggg gcggcctggg catcttccat tccggcattc aagtgcattg 360
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<210> 1213
 <211> 283
 <212> DNA
 <213> Eucalyptus grandis

<400> 1213
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 ctcatgtaat cagaaactga ggaaagggtt atggctgcct gaagaagacg agaaactggt 180
 caattatata agtagacatg ggttgggatg ctggagttcg gttccgaagc tagctgggtt 240
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<210> 1214
 <211> 324
 <212> DNA
 <213> Eucalyptus grandis

<400> 1214
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 agtcgtcgga ggaggaggac attttccagg tgaaccccaa gtagaattgc gatattgggt 180
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 aggagagaaa gaggctgatg aagcagttgc tgggtgttag ggaagaattt gctgatgccc 300
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<210> 1215
 <211> 358
 <212> DNA
 <213> Eucalyptus grandis

<400> 1215
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 ctttgacacc gactatgccc ggtggctcga tgagcatcaa cggctgatca atgaccta 358

<210> 1216
 <211> 329
 <212> DNA
 <213> Eucalyptus grandis

<400> 1216

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caaatggctg	ctcattgctg	ggcgtttgcc	ggggagaacg	gacaacgaga	tcaagaacta	180
ctggaacacg	cacataagga	ggaagctttt	gaaccgaggc	atcgatccgg	ccactcacag	240
gctgatcaat	gagcccgcac	aagatcacca	tgacgagccc	accatttctt	ttgctgctaa	300
ttctaaggag	atcaaagaga	tgaagaaca				329

<210> 1217
 <211> 346
 <212> DNA
 <213> Eucalyptus grandis

<400> 1217						
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ctacaacaac	tacaacttct	cccagccccg	ccacttctgc	aagtccctgc	gccgctactg	300
gaccacggc	ggcacctca	gggacatccc	cgtcggcggc	ggcagc		346

<210> 1218
 <211> 468
 <212> DNA
 <213> Eucalyptus grandis

<400> 1218						
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atgccatcct	ttctgggtcc	agaaagtact	gtccgtcgca	tgagcttgac	aaacacagct	420
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<210> 1219
 <211> 162
 <212> DNA
 <213> Eucalyptus grandis

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gcacgtagag	agggcgctac	atgaccttaa	gtcagtaatt	ac		162

<210> 1220
 <211> 354
 <212> DNA
 <213> Eucalyptus grandis

<400> 1220						
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gctgttggtg	aattacccca	tagggttcct	tatggcttcc	atgccttctt	cgtgactgag	180
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atttacatgg	acagacatct	ttatgctaaa	tatagtggaa	atataaagta	tggt	354

<213> Eucalyptus grandis

<400> 1225

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aggcacctga	gagngaagac	ataacatcac	tgaaccacag	agagctgata	atcctagaag	180
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<210> 1226

<211> 415

<212> DNA

<213> Eucalyptus grandis

<400> 1226

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tccacgggct	attcgtgagg	gatagccacc	tcaaaatgtc	ttagcgttca	tgggcgatga	300
tgcgacgtgg	aggtacagag	attgggggtct	tttattacag	gattttacgt	agtctagagc	360
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<210> 1227

<211> 389

<212> DNA

<213> Eucalyptus grandis

<400> 1227

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gaaggaatgc	aacagatggc	aatcgctttg	ggcaaattaa	ccaatctcga	aggctttggt	180
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agtactctat	gggcgtctcg	tcctcgaggg	tgcatgatgg	atgatgataa	ctcacgcca	360
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<210> 1228

<211> 435

<212> DNA

<213> Eucalyptus grandis

<400> 1228

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gaactcgcg	tgcccctgac	tttgctgag	ttgacgccac	gccctccgag	acgtcacc	180
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agcactcgtg	gaccttcccc	gacataccgg	aggaggtggt	cgtcgcggag	gtcgaggtgg	360
ccggctgttc	gtccgcaccg	gcgaagagaa	agtgtgttgg	tatagaggcg	agaggagaga	420
gaagagagag	aagaa					435

<210> 1229

<211> 252

<212> DNA

<213> Eucalyptus grandis

<400> 1229

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acaggagagg	gcacaacctg	ccttggaagc	tgaagcaaag	accaaaggat	gaaccgataa	180
ggaagaaggt	gtacgtttgc	cccgagccga	catgcgtgca	ccatgacgcg	ttgagagcgc	240
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<210> 1230

<211> 326

<212> DNA

<213> Eucalyptus grandis

<400> 1230

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gggtatgcgg	ccgagatccg	agaccgcggag	aagaagaccc	gantctggct	cggcaccttc	180
gacaccgccc	aggaagcagc	ccgcgcctac	gacgcggccg	cccgagaatt	ccgcggctcc	240
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<210> 1231

<211> 424

<212> DNA

<213> Eucalyptus grandis

<400> 1231

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cgagcaccag	cgaatgtagc	aatgagcccg	aatctcatcc	ggcagctgca	ggaccaacca	180
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gtggccatca	gaacgcgcac	aagagagaga	ggaccctggc	aaagcgggca	atgaggatgg	300
gcatgttttc	ttcacagaga	tattccagct	tggcgtcttt	gcctttgcac	gggtctccca	360
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<210> 1232

<211> 321

<212> DNA

<213> Eucalyptus grandis

<400> 1232

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tcctctctgc	ctcaccaata	cctcgccggc	aacttcgctc	ccgtcgccga	cgagaccct	180
cccgtcaccg	acctccccgt	cgtcggccat	ctccctgatt	gcttgaatgg	agaattcgtc	240
cgggtggggc	ccaattccaa	gtttgccccg	gtcgccggat	accactggtt	tgatggagat	300
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<210> 1233

<211> 508

<212> DNA

<213> Eucalyptus grandis

<400> 1233

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tacgactcct	ctctgcctca	ccaatacctc	gccggcaact	tcgctcccgt	cgccgacgag	180
accctccccg	tcaccgacct	ccccgtcgtc	ggccatctcc	ctgattgctt	gaatggagaa	240

ttcgtccggg	tgggccccaa	tcccaagttt	gccccggtcg	ccggatacca	ctggtttgat	300
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tatgtgagga	cgtcgaaact	taagcaagag	gagtactatg	ggggagctaa	atztatgaag	420
attggagacc	ttaaagggct	ttttggttta	ctcatgggtca	atatgcaa	gctgagagca	480
aaactgaaaa	tactagatgt	ttcatatg				508

<210> 1234
 <211> 503
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1234						
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ggggtccttg	gtctggctga	ccgggtgctc	cgagcttgag	tcgtacaagt	gcgaccgggc	180
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ccttgaattg	gggtcttg	atgtgatccc	tgaaaactgg	ggccttggtc	aacgagccaa	300
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ccagctccac	catgaccata	gcgacatttc	tttcgctgac	attggaataa	ttgcgggcgt	420
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gctgggtggaa	ggagctggcg	gga				503

<210> 1235
 <211> 367
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1235						
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aaggcagcta	tcaaagttaa	tggaagagag	gctgtgacca	actttgaacc	tagtacgtac	120
gatggagaga	tgattgcaaa	agccagcaat	gaaaatagca	tctatggtga	ccatggctct	180
gatctcaatc	tcgggatatc	agcttcttcc	aggggaatgg	tggaacacct	agagccctcg	240
gacgacatgc	gtcaggggaag	tagtttaagg	gtaggaaaact	ctgctgcata	ctgggggtgat	300
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<210> 1236
 <211> 360
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1236						
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cccggggaag	tccccgagcc	cgggcgcccc	cccggaggag	ccggccggca	agaggcacia	180
ggccgggggc	tccggcgagc	acccgacgta	ccgtgggggtc	cgaatgcgga	actggggcaa	240
gtgggtgtcc	gagatccggg	agccgaggaa	gaagtcgaga	atctggctcg	ggacgtaccc	300
cacggcgag	atggccgccc	gggcccacga	cgtggcgcca	ttggccataa	agggcagctc	360

<210> 1237
 <211> 539
 <212> DNA
 <213> *Eucalyptus grandis*

<400> 1237						
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tctccgacct	cctctctcca	cgcgccact	gtcccgtcgc	gcgaattcac	cccgcctgcg	120

taggagaccg	catcctacgc	cgccgnggcg	nanggcggcg	ccacgaggag	atgccagggg	180
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ctctggagag	tatccttttg	ttctatgtgc	tttgattgat	ttatagcaac	tcctagaaag	300
gtgaattatc	gcgcgtcaat	agaacagggg	taggattttca	atagatagga	tgaaaagccg	360
ggaagggttca	gtttcacctc	tgctactaat	tagcattcat	gacccatttc	cttaactttt	420
ataagctcaa	actctgtaat	cactcctctg	tttgagaaaa	tggtgagtgc	tagtgatgca	480
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<210> 1238
 <211> 520
 <212> DNA
 <213> Eucalyptus grandis

<400> 1238						
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gtttcagggtc	aacgtcattc	tcaaccatth	gcatcactgt	cttcagttca	gagtgatttg	180
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agtccacttg	ctgaagctga	tcctgatgga	ttgttaggta	ggaaagagca	gccaataaat	300
gtgatgcagg	tgacacaact	ggataataaa	gggaatggcc	cttcagtcac	gactgagaga	360
ctctctgacg	atggatataa	ctggagaaaa	tatggacaga	agcatgttaa	gggctgtgaa	420
tttccacgca	gctattacaa	atgtacctat	cctaattgtg	aggtgaaaaa	gcttttcgaa	480
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<210> 1239
 <211> 489
 <212> DNA
 <213> Eucalyptus grandis

<400> 1239						
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agtgggagtg	acgtcagatg	atagagatga	tccctaaaat	tggatttgaa	ggacatgctg	180
attttctgtg	cacaagcagt	tgccgaagct	gacatgccta	agacagctgc	tttgatggag	240
gtgttagaga	ggatgggtgc	tgtctcagga	gatccaatcc	aacgggttggg	tgcttactta	300
ttagaagggc	ttagagcgag	gttggaatca	tctgggagca	taatctacag	aaagctcaag	360
tgcaaagagc	ccactggctc	ggaattgatg	tcttacatgt	ccatcctcta	tcagatttgt	420
ccatactgga	agtttgccta	cgagtcggca	aatgttgtaa	ttggggaagc	tataaagtac	480
gagtcaaga						489

<210> 1240
 <211> 306
 <212> DNA
 <213> Eucalyptus grandis

<400> 1240						
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ggcctcgtag	tggcaccgct	tgtgcccggc	gagagcgtgg	ccggtgggga	agctcttgtg	120
gcagatcgcc	ggagggtgtg	gttgccgcgg	aggtctagggt	ggccggttgt	tcgtccgcgc	180
cggcgaagag	aaagtgtgct	ggggagagag	agagcgtgca	gagaggtaga	agagagagaa	240
gagagaggag	agagaacgtg	aaaggaggca	gaagagagag	agtgcagcga	ggggagagag	300
aggaca						306

<210> 1241
 <211> 366
 <212> DNA
 <213> Eucalyptus grandis

<400> 1241
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ggcttgacaa gaagtcaggt ctccaattgg ttcattcaatg caagagtgcg tctctggaaa 120
cctatgggtcg aagaaatgta caaagaagag attgggggatg cggaaatgga ctccaactca 180
tctctcgaca cagccaagcc aaaaacagga gatattcaagt cctccatgga ggaccgggtg 240
gaagaagtgc aacagagtgc aacagctaca cagagatgca gctcaggcca gctcatggac 300
tcatcattcg accggactcc agatgtcgaa atggcaggcc actctgtggg attcaactac 360
ctgaac 366

<210> 1242
<211> 340
<212> DNA
<213> Eucalyptus grandis

<400> 1242
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cgacggccac ctccctcgca tgtccgagga cgacctcccc taccacgtgc gcgtcacgcg 120
ctccggcgac ctcgagaccg tcggcgcgta cgacttcgcc ggccagctcg actctccgat 180
gatcgccac ccgaagatcg acccggtcttc cggcgagatg ttccgctctg tcaagtactt 240
ccgattctcc aaggacggcg agaagtcccc cgacgtcgag atccccctgg ctgagccgac 300
catgatgcac gatttcgcat accgaacgct ttgtcgtgat 340

<210> 1243
<211> 684
<212> DNA
<213> Eucalyptus grandis

<400> 1243
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attggggcag caagttcttg tgggctcaag ctcttcggtg ttcaacttga cctatcttct 180
tcttctctcc ctctcatcag agcatctagt ggttctgctc atccttattc acttgtcata 240
aagaagagcc tcagcatgga tcgtctgtct tcttctctcg cctcctctcc gtctccatct 300
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tatctctctg atggcctcgc cgccagatcc caggagaaaa ggaaaggagt tccatggacg 420
gaagaagagc atcgacatt cttaatgggg ctagagaaga tggggaaagg cgattggaga 480
ggcatctcca ggaactatgt gaccacgaga accccaaccc aagtcgagag tcatgcgcaa 540
aaattctttc tccggcaggc cagtcttaat aagaagaagc ggcggtccag cctcttcgac 600
atgggtagtt ttcggttaacc atgtcacaaa tccatacatt aattgggcac caaactcacc 660
gaaagaaaac tcagagtctt ttca 684

<210> 1244
<211> 329
<212> DNA
<213> Eucalyptus grandis

<400> 1244
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aaagattgat ttcattatcg ccaggagcca aatatgtgca atgcttatgc tgcaagacga 120
ttaactttgt gttggaagag catctgggtg gacaagttaa gtgtggtaca tgtgcgatgt 180
tgcttatgta cccgtatggc gctccagcag tcaagtgttc ggctgcccgt tctgtgacag 240
aaattgggga gcacaacaaa aggaccccat gggcggtaca gcaagggaga cttccccctc 300
ccagtacagt tccttgatgg gcacacgca 329

<210> 1245
<211> 383

<212> DNA
<213> Eucalyptus grandis

<400> 1245
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gcgcgccggt cgctcgacgg cgacgactcg agggtttcca tataattcac ttgaaagaag 120
ctgcagaatg ccgtggaaaa caggacttac cggctctaaa acggaagaag ataaggctct 180
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tgtgtatgca catttcatgt ttgtgcaatc attaaggaac gtagggacag ctctcacaaa 300
gttctttgaa acagaatctc caaatgggtc tcctcgtat gcctcaatga gtacaacacc 360
tgagccaatc gcattaaccg aga 383

<210> 1246
<211> 380
<212> DNA
<213> Eucalyptus grandis

<400> 1246
gctcttcgaa cactttcttc acccctaccc gaaggattcg gacaaagtca tgctggccaa 60
acagacaggg ctactagaa gccaggtgtc gaattgggtt ataaatgctc gagttcggct 120
ttggaagccg atggtggagg agatgtacac ggaggaaatc aaggagcaag aacagaatgg 180
gggaggagca gaggaaaaac caagcaagag tgaacgcgag gactcagcat ccaagtcctc 240
tggcctccag gacaaggccc ccaactccaa tgagaacagc accaagagct tcaaaccaaa 300
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cgggggaaac gtccgcagca 380

<210> 1247
<211> 360
<212> DNA
<213> Eucalyptus grandis

<400> 1247
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agaacaaaag aaaaaaggat catgggaaga tccccatgtt gcgaaggcaa tggcctgaag 120
aaagggccct ggtcttctga ggaagacaag aagctccttg attttatcca gcagcacggc 180
catgggagct ggatctctct ccctaaacgt gcaggtctta atagatgtgg caagagctgc 240
agattgagat ggataaacta cttgtggccg gacatcaaga gagggagttt ctccccggaa 300
gaagaacaaa ccatcttgca tctccactcc gtgctcggaa acaaatgggtc ggcgatcgca 360

<210> 1248
<211> 351
<212> DNA
<213> Eucalyptus grandis

<400> 1248
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cagctagcta gtcaagtttg aaaatgttgt gccaatcttct gtttctttaa tacaaagttg 120
gggaaaacaa aatttacatc cgctcaaat ttaggtaaaa aaaaacccta tctcctccgg 180
ctttgacttg tcagccgccc tcaggttgac ttgaatacca ggttcacgc accggcgggc 240
acaatctcct gcgacgcggg ctgggagtga cgatgctccc cctcgtacgt cagcatcagc 300
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<210> 1249
<211> 419
<212> DNA
<213> Eucalyptus grandis

<400> 1249
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aagaaggggg tgacgtccaa gggtgtggac tacattgaga agctgatcgt gaagttcatg 120
tacgactcct ctctgcctca ccaatacctc gccggcaact tcgctcccgt cgccgacgag 180
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ggagatggca tggttcatgg gatgcggata aaaaatggca aagctactta cgtctctcgc 360
tatgtgagga cgtcgaaact taagcaagag gagtactatg ggggagctaa atttatgaa 419

<210> 1250
<211> 632
<212> DNA
<213> Eucalyptus grandis

<400> 1250
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ggagcgacg gcgcacggac ccgacggacg ccgtcctccg ccaccgtcgc cgaggttgag 120
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cggctgttcc tgctcgggct acagaaagta ggaaagggcg attggagagg catttcgaag 480
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ccgatacggg cactgggttg tacaatgatg ga 632

<210> 1251
<211> 202
<212> DNA
<213> Eucalyptus grandis

<400> 1251
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aggttaacat gttgaaggat tacgcttcag aggactggat tacaggtgtt gaccgcttcc 120
ggttgagctt gggtgaattt cttgataagt tgaataagta tgccggagtcc tctgttcata 180
tgtacgtgtc cttgaaaag gc 202

<210> 1252
<211> 378
<212> DNA
<213> Eucalyptus grandis

<400> 1252
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tatccaactg aggtttgtct gcaagtgtca agtgagaatc aagaaactca taacatgggt 120
aacttgcata ctgcaggcga agataattgt gatctctcac aggcagatcc actcgagatc 180
ccagaggtgg attttagaaa actggaactg catcttggtt tctcgtcttt ttggtctaca 240
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tgccttccat ttccatcaag ccggtctcct aaacgccttc ggggttctga gacccattt 360
cctgtcttg atgctgga 378

<210> 1253
<211> 388
<212> DNA
<213> Eucalyptus grandis

<400> 1253
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 aacgaggctg tttttacgca aacttcggtc ataagctgtg ccttgcaatc gtttgtaa 180
 cctccaaatg ctaagggtcac gggtcacattc ctctctgatc tttgagcagc tcatggcacc 240
 aacgtccaag gaacattttct taaaaaggat gatccaaaag ttactgctct gattcaacaa 300
 gccgagctgc tcagttccct tgcggtgaaa gtcaatgcag ataacatgga ccagagtctt 360
 gaaaatgctt ggaagggtct ccaggaat 388

<210> 1254
 <211> 380
 <212> DNA
 <213> Eucalyptus grandis

<400> 1254
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 ggcggcggtga ggctcttctg ggtgaggctg acggacggct cgatcatcaa gaagagcgcc 180
 agcaccagca gcctctcgtc ccaccacctc ctccccccct cctcctcgcc gtgcgcttcg 240
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 caccaccacc accagcagcg cgaccgggac ggggtacttgt ccgacgatcc cgcgcaagg 360
 gcctgcgctt ccgatcgccg 380

<210> 1255
 <211> 350
 <212> DNA
 <213> Eucalyptus grandis

<400> 1255
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 catggacggt ttttgagttg catgaatgct gtttggcatc ctgaatgttt ctgctgccgt 180
 gcttgacacc tgccaatttc tgattatgag ttttctttat caggcaatta tccttaccat 240
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 acaaaccttg ccggtcttat tgagtacagg gcgcatecct tttggagtca 350

<210> 1256
 <211> 377
 <212> DNA
 <213> Eucalyptus grandis

<400> 1256
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 gaggagtaac aagcagacag cagtgtatgt tgatgacacc gagctatccg agatgatgga 120
 taaattgttg gtctgtcata tttaaaggcaa gagtgcagat tcaaagtctg atgaatcctc 180
 taaaaaagaa gtaagtaaat ctttacagca gaatagacag acacacactg ctgatgggtg 240
 gaagtttcat aataagaaac caacccaac cagcaatatg acagagatgg tggatctcag 300
 aactttgttg atcctttgtg cacaagctgt ctcttctgac gatcgaagga ctgctaata 360
 ctatctaagg cagattc 377

<210> 1257
 <211> 651
 <212> DNA
 <213> Eucalyptus grandis

<400> 1257
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taatgcg	ccagctctga	tcatacctat	gcacgcgaat	ttggacaacc	agtcggagga	240
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<211> 311

<212> DNA

<213> Eucalyptus grandis

<400> 1258

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<210> 1259

<211> 588

<212> DNA

<213> Eucalyptus grandis

<400> 1259

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<210> 1260

<211> 620

<212> DNA

<213> Eucalyptus grandis

<400> 1260

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620

<210> 1261
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<212> DNA
<213> Eucalyptus grandis

<400> 1261
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<210> 1262
<211> 384
<212> DNA
<213> Eucalyptus grandis

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<210> 1263
<211> 381
<212> DNA
<213> Eucalyptus grandis

<400> 1263
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<210> 1264
<211> 316
<212> DNA
<213> Eucalyptus grandis

<400> 1264
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tgcgagcggg ggtcccgaac gtgtccagga tggacaaggc gtccctgctc tccgacgcgg 180
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